DECEMBER 1982

Pension World

The Magazine for Plan Sponsors and Investment Managers / A Publication of Communication Channels, Inc

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Hershey Foods' Sweet Pension Fund

The Effect of Currency Exchange Rates

Evaluating Your Master Trust Bank

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7th Annual Directory of Master & Directed Trust Services

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Pension World

December 1982
Volume 18 Number 12

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Germany—a possible crisis in the occupational pension sector

Most economists generally agree that the worldwide recession began in 1974. Besides the beginning of the recession, two other important economic events occurred in 1974. First, social security taxes were increased in most countries, usually with the employer picking up the largest share of the increase. Second, pension reform legislation was enacted in Germany on December 22, 1974. Passage of this legislation was not necessarily directly related to the beginning of the worldwide recession. However, the combination of the two has contributed to a continued decline in the German economy, including a current occupational pension crisis.

Most international benefits planners are familiar with the "Law for the Improvement of Employee Benefits," which has two parts. Part I deals only with labor law provisions, while Part II deals with specific tax regulations. This article will discuss two aspects of the 1974 law: 1) protection against insolvency risk, and 2) dynamism of pension benefits.

One of the major criticisms of German pension plans has been the lack of security should the employer become insolvent. (Most employees are members of unfunded pension arrangements—book reserves.) For those not familiar with the German book reserve "funding" arrangements, briefly this is a method whereby actuarially determined amounts are allocated to an internal reserve on the books of the company. This is essentially an accounting device, as there are no funds put aside. The company, within limits, reserves a "tax deduction" for the reserves booked.

The 1974 law created an insolvency insurance fund called the Pensions-Sickerungs-Verein (PSV a G). Coverage under PSV a G is compulsory for all private sector pension plans. Governmental and quasi-governmental organizations are not covered. The law protects vested benefits as well as payments to pensioners. No contribution is required for plans funded as Pensionskassen, since these funds come under the control of the insurance authority, as well as direct insured plans, where members have an irrevocable right to benefits and there is no loan to the employer. Contributions are also not required from new plans that are neither paying benefits nor have members who are entitled to deferred vested benefits.

Pensions — Sickerungs — Verein Data (1975-present)

Year	Contribution Rate Prelim./Final per Thousand		Claims No.	Claims Million DM	No. of Pensions	No. of Vested Rights
1975	1.5	1.5	249	74.7	5,060	7,290
1976	1.5	1.9	267	163.6	8,614	8,795
1977	1.7	1.9	246	128.2	4,745	5,808
1978	1.7	0.7	187	77.6	4,765	6,785
1979	0.5	1.1	154	127.5	5,346	8,116
1980	0.8	1.4	158	170.7	6,857	6,702
1981	0.9	2.0	228	276.9	11,274	11,773
1982	1.4					
Totals			1,489	1,019.2	46,661	55,269

Source: Victoria Insurance Co., Dusseldorf, Germany

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The initial rate in 1975 was 1.5 per mil of "base value," and it was expected that the rate would vary. Long-term estimates initially put the rate at no higher than 3 to 6 per mil of "base value." The accompanying chart provides statistical data from 1975 to 1982.

At present, 33,895 companies with some five million members (1.9 million pensioners and 3.1 million vested employees) are covered under PSV a G.

AEG-Telefunken, one of the largest German employers, went into receivership in August. It is estimated that for the more than 25,000 current pensioners the PSV a G liability will be more than

DM 1,200, which will increase the contribution rate to 8 to 10 per mil of "base value," or four to five times the 1981 rate. PSV a G will also be liable for more than 25,000 vested members of the AEG-Telefunken pension plan, which will require increased contributions in future years.

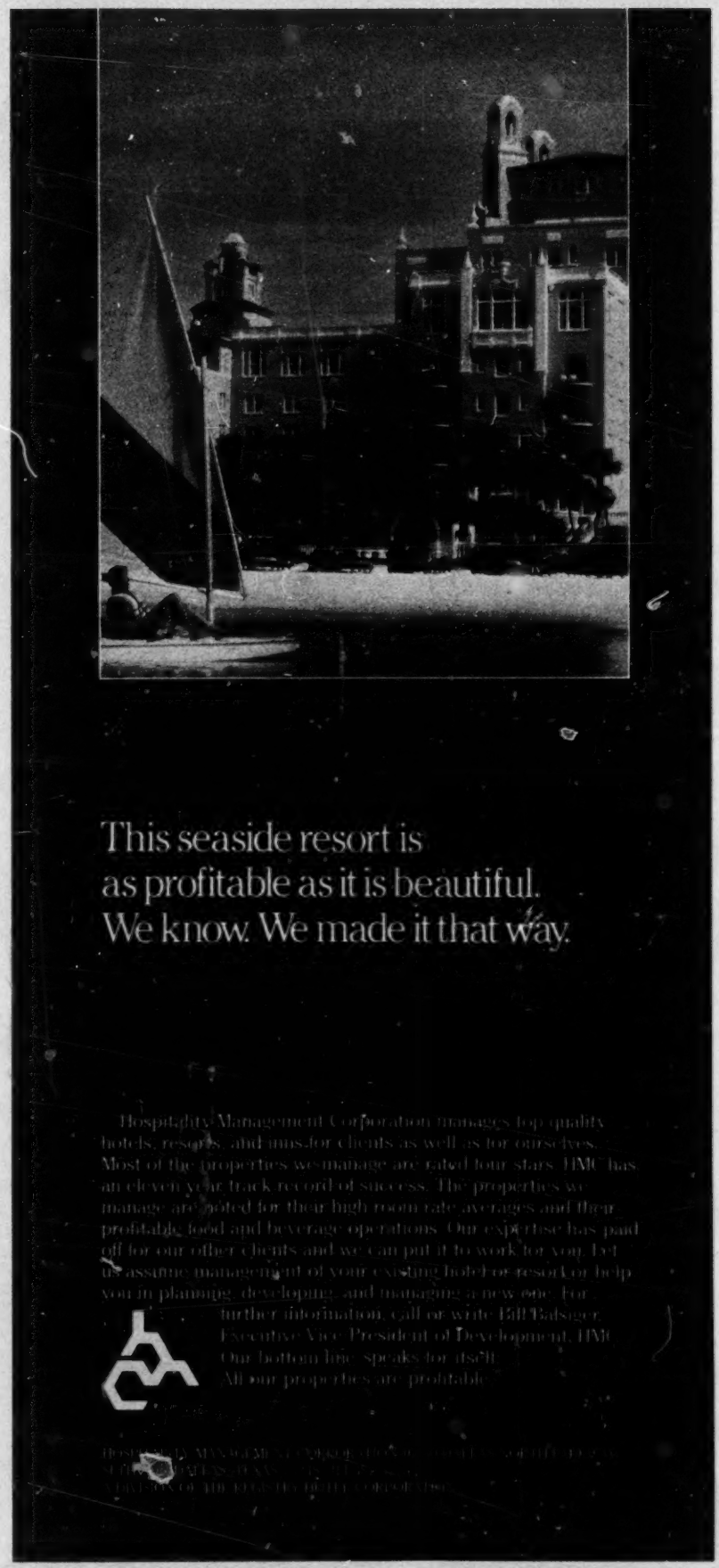
As of August, 1982, the unemployment rate in Germany was 7.4 percent and on the rise. What we see in Germany is a situation whereby the "successful" companies with pension plans must "bail out" the unsuccessful companies with pension plans, placing an additional financial burden on those companies still trading. This eventually will, in my opinion, lead to increased unemployment.

It will be interesting to see if in the long run the 1974 pension reform law may slow or significantly reduce the German economic recovery.

Let's look at that controversial part of the 1974 law dealing with dynamism of pension benefits. The 1974 law states that the employer is obliged every three years to review and "adjust" the current pensions in payment, taking into consideration the interest of the pensioner and bearing in mind the economic situation of the employer.

The first review took place on January 1, 1975, and there were additional reviews on January 1, 1978, and January 1, 1981. A number of German Labor Court decisions placed certain limitations on the upper limit of the adjustments. Basically, the employers could limit the adjustment to the salary increase of active members if the salary increase was, as has been the case in Germany, below that of the inflation rate. Companies in trouble economically could reduce the adjustment or refuse it altogether.

While it appears evident that there was a need for some form of legislation to protect pensioners and vested benefits in Germany, it will be interesting to see if in the long run the 1974 law may slow or significantly reduce the German economic recovery. □



Effect of exchange rates on foreign equity programs

U.S. investors incur the risk of currency fluctuations when investing in assets that are denominated in foreign currencies. This article examines the risk in the context of equity market investment and answers two critical questions: 1) what has been the impact of currency fluctuation in the past, and 2) have exchange rates become more volatile?

Effect of currency movements

In addressing the effect of currency movements on the returns to foreign equity portfolios, two time periods are examined. The first is from December 31, 1970, through September 30, 1982, while the second includes 1977 through September of 1982. The first was chosen to include the entire period of floating exchange rates as well as the bull markets of 1971 and 1972, and the bear markets of 1973 and 1974. The second was chosen to include the latest five calendar years.

Tables I and II show the annual rates of return to the equity indexes expressed in both local currencies and U.S. dollars. The six countries examined represent over 85 percent of the equity capitalization of the most widely followed non-North American equity benchmark, the Capital International Index for Europe, Australia, and the Far East.

For two countries, France and Switzerland, currency movement was a major portion of the total return to U.S. investors. For the other countries, currency was not a dominant portion of return. To a portfolio diversified across all of the countries, curency movement represented a small portion of the total return. For the entire 1971-82 period, the non-North American equity index experienced a 7.6 percent annual gain when measured in local currencies and an 8.8 percent annual gain when converted to dollars. For the 1977-82 period, the aggregate effect of currency fluctuation was miniscule, adding only 0.2 percent per year to the equity index return. Of course, for individual countries and for shorter holding periods, the currency effect might be larger. However, for a long-term investor with a diversified portfolio, currency has not played the major role in the returns to foreign investments.

Table I Equity and Currency Returns (Annualized Returns, 12/31/70-9/30/82)

Country	Equities in Local Currency[1]	Equities in U.S. Dollars[2]	Change in Currency[3]
Australia	5.2%	3.7%	−1.4%
France	5.1	2.9	−2.1
Germany	5.3	8.7	3.2
Japan	12.4	15.3	2.5
Switzerland	3.5	9.8	6.1
United Kingdom	11.8	8.6	−2.9
Aggregate Non-North American Equity Index[4]	7.6%	8.8%	1.1%

[1]Annualized total return, including dividends, to the Capital International Equity Index for the country, expressed in local currency.
[2]Annualized total return after translating to U.S. dollars.
[3]Annualized percentage gain (positive) or loss (negative) or the value of the local currency relative to the U.S. dollar.
[4]The Capital International Index for Europe, Australia, and the Far East.

Table II Equity and Currency Returns (Annualized Returns, 12/31/76-9/30/82)

Country	Equities in Local Currency[1]	Equities in U.S. Dollars[2]	Change in Currency[3]
Australia	7.7%	5.2%	−2.3%
France	6.6	0.1	−6.1
Germany	−0.1	−1.2	−1.2
Japan	6.6	8.3	1.6
Switzerland	−1.7	0.4	2.1
United Kingdom	14.6	14.5	−0.1
Aggregate Non-North American Equity Index[4]	9.2%	9.4%	0.2%

[1]Annualized total return, including dividends, to the Capital International Equity Index for the country, expressed in local currency.
[2]Annualized total return after translating to U.S. dollars.
[3]Annualized percentage gain (positive) or loss (negative) or the value of the local currency relative to the U.S. dollar.
[4]The Capital International Index for Europe, Australia, and the Far East.

by **MARK ENGLAND-MARKUN**
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Table III Exchange Rate Volatility Results

Changes Versus Equally Weighted Basket

Year	MAMR[1]	SDAMR[2]
1975	6.3%	1.5%
1976	6.7	2.4
1977	6.7	2.0
1978	6.7	2.3
1979	6.7	1.6
1980	6.7	1.8
1981	6.6	2.2

Changes Versus GNP Weighted Basket

Year	MAMR[1]	SDAMR[2]
1975	1.1%	1.2%
1976	1.6	2.1
1977	1.1	1.8
1978	1.8	1.8
1979	1.2	1.2
1980	1.4	1.4
1981	1.7	1.5

[1]MAMR = *mean absolute monthly return*, which is the mean of the absolute values of the 192 returns. This is a good proxy for the average monthly change of currencies versus the basket of currencies.
[2]SDAMR = *standard deviation of absolute monthly return*, which is the standard deviation of the absolute values of the 192 returns. This is a good proxy for the distribution of absolute monthly changes — that is, how far from the MAMR are the changes.

Exchange rates more volatile?

During the past year, some market participants and observers have expressed the belief that foreign exchange rates have become more volatile. The primary reason used to explain the perceived higher volatility is that exchange rates no longer move in response to longer-term trade imbalances; rather, they respond to changes in the financial markets (changing borrowing requirements and interest rates) in order to secure highest returns. Certain participants view a volatility increase as an opportunity to profit by moving into and out of currencies at correct times, while others express the fear that volatility increases only make their exposures in foreign currencies more risky.

Two simple tests were constructed in order to examine exchange rate volatility each year from 1975 through 1981. The results indicate that the monthly volatility of exchange rates was quite stable during the 1975-81 period, and no increase in volatility occurred in 1980 and 1981. The tests were constructed as follows:

A basket of 16 currencies (Australian dollar, Belgian franc, Canadian dollar, Danish Krone, French franc, Deutsche mark, Hong Kong dollar, Italian lira, Japanese yen, Dutch guilder, Singapore dollar, Spanish peseta, Swedish Krona, Swiss franc, British Sterling, and U.S. dollar) was constructed by weighting each equally. For each month, the return of each currency relative to the market basket was calculated. All 192 observations during each calendar year (12 monthly returns x 16 currencies) are grouped as a single set of observations for that particular year.

A second test was performed in the identical way except that the currencies were weighted by home country GNP when forming the market basket of currencies. The statistics shown in Table III were calculated for each year (*i.e.*, on each set of 192 observations) for each of the two sets of test data.

Currency markets have not become more volatile during the past two years. On the contrary, the magnitude of monthly movements has been remarkably stable.

Conclusion

Currency markets have not become more volatile during the past two years. On the contrary, the magnitude of monthly movements has been remarkably stable. It appears that 1980 and 1981 were years in which the U.S. dollar moved a bit more than usual, and the heavy GNP weight of the U.S. led to a moderate increase in average monthly changes (versus the GNP weighted basket) during the past two years. However, the changes were not greater than in 1976 and 1978. One can conclude that risk of exposure in foreign currencies has not been increased by volatile currency markets. □

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International investing–asking the right questions

The plan sponsor's goal should be to understand, review, and control his international portfolio — and to hire managers who do the same. A complete look at the international markets is critical to insuring a systematic approach.

Historically, foreign equity markets have outperformed the U.S. stock market as well as provided reduced volatility or risk exposure. The value of international investment is becoming more broadly accepted, although one need only look at 1980 or 1981 to realize that international investment may be disadvantageous at times, either from local market or currency-related fluctuations. Its return is clearly a two-edged sword.

How much does the international portfolio parallel or require an approach similar to that used by plan sponsors for their domestic equity portfolio managers? There should be a *strong* parallel. The plan sponsor's goal should be to understand, review, and control one's international portfolio—and to hire money managers who do the same. The money manager's approach is of major importance in considering international investment. It is also important to understand the international portfolio's role within the total fund.

Unfortunately, the history of international equity investing is not, nor can it be, a simple guide to the future internationally. A complete look at the international equity markets is critical to insuring a systematic and organized approach to the international investment problem—both for the plan sponsor who is interested in alternative assets and for the international manager who provides the international vehicle.

Before a plan sponsor invests in an international vehicle, certain essential questions must be addressed.

1. How does one integrate the international equity asset into the total pension portfolio? What is the anticipated risk? Return? Can historical characteristics be used for this critical decision? If not, what should be used? Should the decision to diversify internationally change over time?
2. What is the role of the U.S. equity market in international portfolios?
3. Is the choice of an "active" or "passive" approach a well-defined choice?
4. What is the impact of active money management—the incremental return and possible additional risk? How important is a money manager's style/risk-taking?
5. Can the plan sponsor expect to measure portfolio performance and portfolio risk to have an effective review and control function?

A review of the historical data is the first step both in focusing these questions and in providing some critical answers to the first major issue—the value and role of international diversification.

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History of return and risk

Traditionally, in discussing international investments, data on total return versus risk or volatility are referenced—and the conclusion drawn is fairly straightforward: The pension plan could *reduce* risk and *increase* return by internationally diversifying its equity portfolio. Seems too good to be true, doesn't it?

That the risk and return have shifted, sometimes dramatically, for different time periods is seen in several instances.

- The broad international markets, as represented by Europe and the Far East (EAFE) and the U.S., have undergone significant changes in risk/volatility over time. For instance, EAFE's risk doubled from the 1964-69 period to 1969-74 (Figure I).
- International portfolios have, over extended periods (1959-64, for instance), underperformed the U.S. stock market, in contrast to the longer averages and the presumption of most plan sponsors.
- In certain countries, a significant component of the return is the result of changes in the foreign exchange rates. Recent experience reminds us of the potential significance of such changes.
- Certain countries have experienced extraordinary and potentially unique returns and risks (*e.g.*, Hong Kong and Singapore), while others have seen dramatic shifts in volatility. For example, the risk in the United Kingdom rose from 11.6 percent volatility in the 1959-64 pe-

Figure I Changes in Risk/Volatility

Return	1959-64	1954-69	1969-74	1974-79	1969-79
EAFE	5.50%	9.90%	.97%	18.60%	9.44%
USA	11.40%	5.30%	(3.70%)	13.30%	4.61%
Risk					
EAFE	11.20%	9.50%	18.50%	16.60%	18.00%
USA	14.50%	12.30%	19.60%	16.30%	18.40%
Correlation					
EAFE vs. USA	.56%	.50%	.67%	.62%	.66%
For a 90% USA/10% EAFE Portfolio					
Return	10.80%	5.76%	(3.23%)	13.83%	5.09%
Risk	13.70%	11.60%	18.90%	15.80%	17.80%

riod to 39.4 percent in 1974-79—an increase of 250 percent.

- In contrast to most other countries or the EAFE index, the risk of the U.S. stock market has been relatively stable over time. Even for the U.S., the historical estimates are inadequate given the recent past.

What does this imply for the plan sponsor? International investments have certainly had exceptional returns and, probably more importantly, have provided significant diversification value. As the data suggest, however, it is a very dynamic and changing set of markets. Both characteristics—diversification and dynamic markets—will likely continue.

The plan sponsor always needs to think (and estimate risk and return) prospectively when considering the pension fund asset allocation. Will history repeat itself? Probably not, and the data underscore the dynamic changes that have occurred within the last 20 years. To forecast returns and risks, one needs a dynamic approach.

A consistent and flexible methodology that can provide updated estimates is important. What is required is an organized, quantitatively oriented framework for this forecasting as well as the real goal, decision-making.

Estimating risks and returns

Plan sponsors and money managers are increasingly using sophisticated asset allocation models to suggest both long-term and tactical asset deployments. They require numerical expectations about the various assets in terms of return, volatility, and co-movement.

With 17 or so equity capital markets, in addition to the U.S., to be represented in a true global index fund, money managers—either passive or active—typically include eight or nine countries. One example, Bankers Trust's international investment portfolio, is currently focusing on eight countries—Japan, the United Kingdom, the Netherlands, France, Germany, Switzerland, Canada, and Australia.

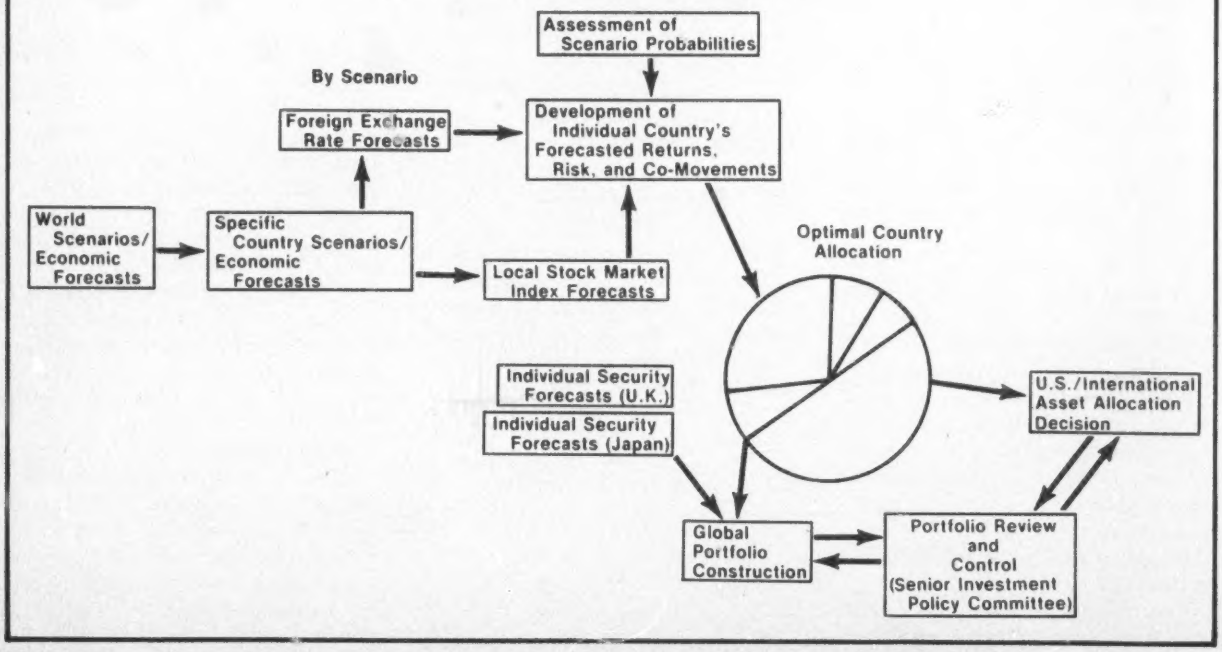
The approach to estimating the return/risk of the international markets and to determining the optimal country allocation may closely parallel the methodology used in U.S. asset allocation. Bankers Trust's approach requires forecasts of:

—eight local market rates of return,

—eight foreign exchange rates of return,

Figure II

Country Selection, Individual Selection, and Internal Review and Control


Assessment of Scenario Probabilities
By Scenario
Foreign Exchange Rate Forecasts
Development of Individual Country's Forecasted Returns, Risk, and Co-Movements
World Scenarios/ Economic Forecasts
Specific Country Scenarios/ Economic Forecasts
Local Stock Market Index Forecasts
Optimal Country Allocation
Individual Security Forecasts (U.K.)
Individual Security Forecasts (Japan)
U.S./International Asset Allocation Decision
Global Portfolio Construction
Portfolio Review and Control (Senior Investment Policy Committee)

—the volatility or risk of each local and foreign exchange market, and

—the co-movement or correlation of the countries with each other, both at the foreign exchange and local market level.

The data required for the allocation model also need to be compatible with one's U.S. asset allocation framework, most frequently focusing on the domestic equity and long- and short-term debt markets. One should include all the pension assets—both domestic and international.

The proper country allocation, or U.S. versus international mix, is a function of both the return and risk of diversification.

A pension fund should also decide about both its core international commitment, and whether it is interested in timing this commitment. This methodology facilitates both the active country selection and the timing decision.

Additionally, if one's goal in the past had been to control the level of risk, perhaps defined as fluctuation in contributions, etc., one's core international commitment sould have changed as its value as a diversification vehicle fluctuated (see Figure I).

The key benefits of this approach, then, are a view of the *prospective* benefit (return and diversification) of international investment and a specific estimate of the overall risk or volatility of the international portfolio (and of the properly integrated total portfolio risk).

The U.S. equity market

The asset allocation issue, increasingly a plan sponsor's decision, also suggests a related question: Should the international fund manager be permitted to invest in the U.S. market? If one has allocated funds offshore as a result of a thoughtful asset allocation process, it is inappropriate to leave the decision to invest in the U.S. completely to the international money manager. The situation is analogous to any money manager who is a balanced manager or who engages in extensive market timing—one has generally established guidelines for such activities. The plan sponsor should do the same for the international money manager. Set limits—either no U.S. investment or no more than a specified amount.

Any casual survey of international portfolio managers suggests a level of autonomy, freedom, and different styles unequaled by domestic asset managers. The resulting risks can be extreme if the plan sponsor does not carefully articulate what he wants, then monitors, reviews, and guides the money manager. Remember from the earlier discussion that significant changes over time in the risk and return for specific countries have occurred. The country/stock allocation and other decisions made by active international managers can also have a significant impact on portfolio returns and risk.

The best international portfolio allocation is based on the plan sponsor's perceptions of the appropriate risk tolerance.

International money manager

What are the specific questions facing a pension sponsor in selecting an internationally oriented money manager?

1. Should it be an active or passive approach? Are current passive funds similar to index funds available in the U.S.?
2. How complex are the decisions the money manager needs to make? Does the manager's style/risk-awareness matter?
3. How much risk is the manager really going to take? Can the plan sponsor effectively exert any control? What sort of guidelines are possible?

Summarizing the plan sponsor's concern: How much does the inter-

Figure III Long-Term Foreign Equity Market Forecasts

	Expected Return[1]	Standard Deviation[1]
Cana.	13.15%	10.65%
Frn.	13.07	8.40
Alia.	20.39	12.12
Neth.	17.57	6.98
Swit.	12.79	7.83
Ger.	19.84	9.72
U.K.	15.36	11.16
Japan	22.98	15.94

Correlation Matrix

	Cana.	Frn.	Alia.	Neth.	Swit.	Ger.	U.K.	Japan
Cana.	1.00%							
Frn.	0.62	1.00						
Alia.	0.51	0.49	1.00					
Neth.	0.48	0.54	0.52	1.00				
Swit.	0.41	0.50	0.37	0.59	1.00			
Ger.	0.54	0.57	0.50	0.61	0.56	1.00		
U.K.	0.30	0.34	0.30	0.40	0.30	0.35	1.00	
Japan	0.61	0.60	0.53	0.59	0.51	0.58	0.37	1.00

Optimize Related Data

Asset Class	Annual Transaction Costs		Bounds		Current Portfolio
	To Buy	To Sell	Lower	Upper	
Cana.	0.90%	0.90%	5.0%	25.0%	14.0%
Frn.	2.00	2.00	0.0	20.0	7.0
Alia.	2.30	2.30	0.0	15.0	6.0
Neth.	1.05	1.05	0.0	10.0	3.0
Swit.	1.30	1.30	0.0	20.0	5.0
Ger.	1.85	1.85	5.0	25.0	11.0
U.K.	2.50	1.50	10.0	35.0	19.0
Japan	1.25	1.80	20.0	50.0	35.0

[1]Reflecting both local market and foreign exchange expectations.

Figure IV Historical Total Returns (12/31/70-12/31/80)

	Annualized Return				
	Total	Capital	Dividend	Currency	Total Risk
U.S.A.	6.89	2.44	4.34	—	17.4%
Japan	21.46	12.34	2.16	5.83	22.7%
Australia	10.47	5.71	3.90	0.58	27.8%
U.K.	12.80	6.94	5.52	−0.04	34.1%
Switzerland	12.99	0.95	2.39	9.32	22.1%
Netherlands	12.40	1.08	5.51	5.39	21.2%
Germany	11.85	1.27	3.79	6.41	21.6%
France	9.70	2.63	4.79	2.00	29.0%
Canada	10.97	9.03	3.47	−1.63	16.0%
Int'l Average Using Current "Weights"				3.37%	

national portfolio problem require an approach similar to that used by plan sponsors for their domestic equity portfolio managers? There is a significant parallel because the *complexity* of the investment is significantly greater. If nothing else, the plan sponsor is dealing with a geographically diverse market with two variables: stock selection and foreign exchange decisions. Thus, *more* attention to selecting, reviewing, and controlling international money managers is required, *not* less.

One approach to implement an international investment portfolio process and to deal with the issues is described below. It provides both the decision-making and forecasting framework and an estimate of risk incurred.

The key attributes of this approach are:

1. a global economic scenario forecasting approach;
2. a quantitative decision-making framework, balancing anticipated returns and prospective risk or volatility;
3. forecasts of anticipated returns for each country resulting from changes in the local stock market, foreign exchange rates, and individual stocks; and
4. specific estimates of the volatility (risk) resulting from:

—the international investment market as a whole (the passive vehicle),

—the active country allocation decisions, and

—the stock selection decision.

The key attributes of the fund are:

—active country selection;

—active stock selection;

—current involvement in eight markets: U.K., Canada, Japan, the Netherlands, Switzerland, Australia, Germany, France;

—controlled risk—forecasted and limited to less than 5 to 6 percent residual risk; and

—integration with the broader asset allocation decision—U.S. stocks vs. U.S bonds vs. cash vs. international equity.

This approach reflects the perception that control of risk resulting from the active country or stock decisions is critical.

Figure II diagrammatically depicts the country selection decision, the individual stock selection process, and the internal review and control. The methodology isolates both the return and active risk incurred due to foreign exchange, local market, or security specific "bets" in the portfolio construction process.

Unfortunately, plan sponsors are not always aware of the risk they are exposed to from their managers' decisions. Transaction costs and liquidity considerations are important in the international framework. Figure III summarizes both the forecasts and the sort of key constraints one could utilize. The outcome of the analysis is a set of possible optimal portfolios for differing levels of desired active return and risk exposure. The best portfolio allocation is based on the client's perceptions of the appropriate risk tolerance.

Summary

International investing has been and will continue to be a successful avenue for U.S. plan sponsors. A variety of issues and, therefore, choices faces the plan sponsor before he commits funds overseas. There are also a variety of vehicles available—active and passive, different levels of risk, etc. The historical data highlight the importance of focusing on these choices and the need for a systematic framework for the asset allocation issue of how much overseas and for the active investment management issue of which "bets" and how big? □

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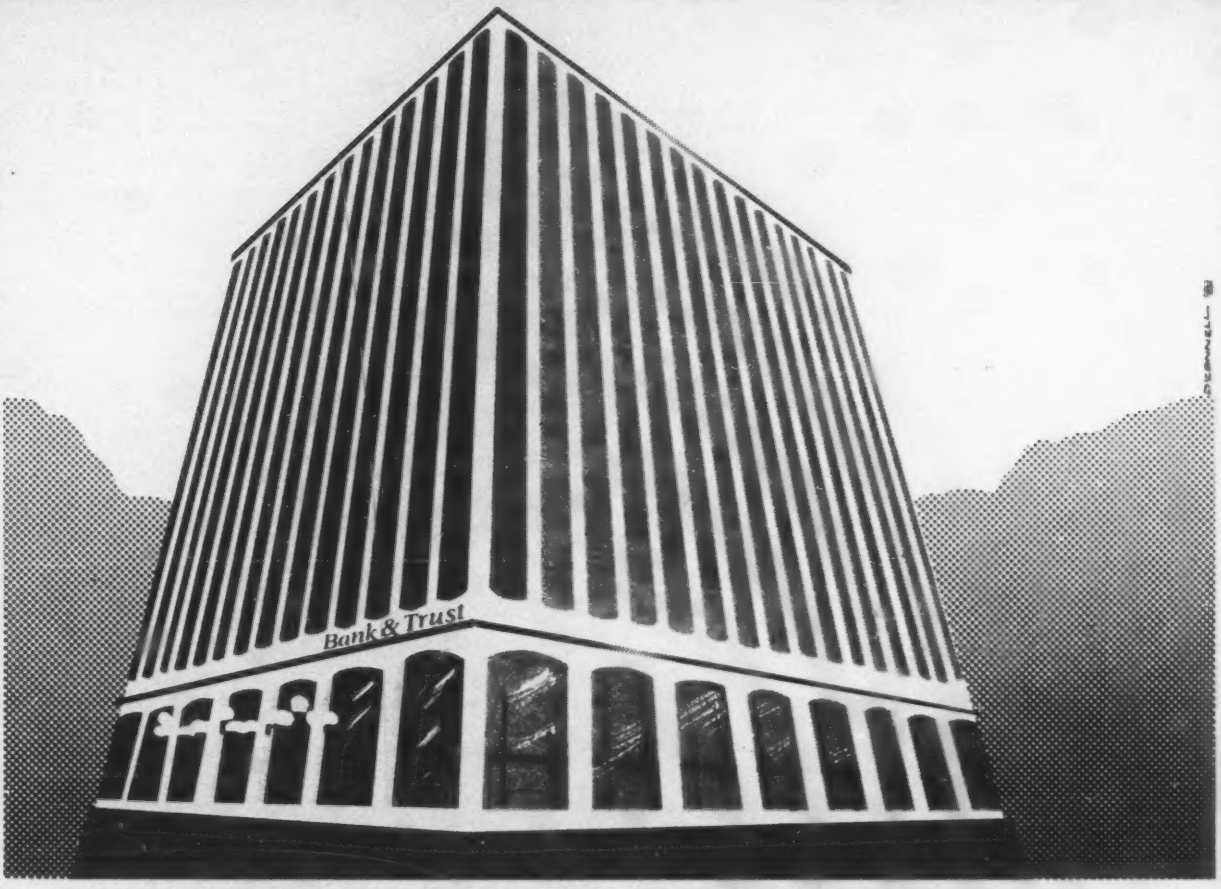

7th Annual Directory of Master and Directed Trust Services

The following *Pension World* directory was compiled from information obtained from questionnaires mailed to 700 U.S. banks and trust companies during September, 1982. Of the 124 responses, 89 firms indicated that they offer master and/or directed trusts.

Master Trust continues to be defined in individual ways by the banks and trust companies offering this service. A technical definition, according to several authorities in the corporate trust industry, is a trust in which *multiple* plans of the same company or control share investment experience under *one trust document*. In working terms, however, some of the definitions used for master trust include: 1) an arrangement under one trust agreement that includes multiple money managers, one of which may or may not be the trustee; 2) a pooling of one sponsor's assets, which may include multiple managers and *one* or more plans, under one trust document; or 3) a pooling of directed trusts.

Similarly, several different definitions are given to the term *directed trust*. The general definition is a trust under which the trustee has less than full managerial authority of the plan sponsor's assets. However, the term is often used synonymously with *directed portfolio*, in which a manager has the authority to direct only those investments within the particular portion of assets under his direct control; and it is sometimes associated with *general trust*, in which a separate trust agreement is written for that portion of assets under the manager's control.

Recognizing this, figures gleaned in the following survey are not always comparable, although *Pension World* has taken every precaution to present these data in their most accurate form. All information in the directory was provided by the banks and trust companies listed.

Though the number of firms included in the directory has been expanded to 89 from 84 last year, the list is not exhaustive. *Pension World* appreciates the efforts of those who completed and returned the questionnaires and hopes that each year's directory will continue to be more comprehensive.

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
American National Bank & Trust Co. **736 Market Street** **Chattanooga, TN 37401** **Contact:** William T. Hampton/ T.O. 615/757-3346	7	16	$30.4	$41.5	$39.2	$243.9
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
American Trust & Savings Bank **Town Clock Plaza** **Dubuque, IA 52001** **Contact:** James Cooney/T.O. 319/582-1841	0	63	0	$22	$1	$40
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
American Trust Co. of Hawaii, Inc. **841 Bishop Street** **Honolulu, HI 96813** **Contact:** Robert F. Midkiff/ President 800/367-5210	6	2,321*	$83.6	$361.9*	$361.9	$361.9
	Services Provided: Performance measurement, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement *Nondiscretionary					
AmeriTrust **900 Euclid Avenue** **Cleveland, OH 44022** **Contact:** Robert C. Gebauer/ V.P. 216/687-5750	22	13	$1,200	$250	$100	$3,700
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, asset allocation, dedicated bond portfolio, immunized bond portfolio					
Bank of America, NT & SA **Bank of America Center** **555 California Street** **San Francisco, CA 94104** **Contact:** Carole A. Swartz/ V.P., Sales & Mktg. 415/622-5238	23	825	$8,000	$5,000	$3,000	$18,000
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, benefit disbursement					
Bank of New England **28 State Street, 12th Floor** **Boston, MA 02106** **Contact:** Joyce A. Braude/ A.V.P. 617/973-1913	0	69	0	$244.9	$16.7	$597.4
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
Not reported	Not reported	Not reported	Trade date (full accrual)	No	American National Bank & Trust Co. temporary investment fund (TIF)	1st of month	15-45 days following close of plan year

Crediting Dividend and Interest Policy: On payable date
Fee Structure: Based on combination of asset value and individual services performed

108	54	36	Contractual settlement date	No	Money market funds	Month-end	Monthly

Crediting Dividend and Interest Policy: Computer credit on payable date
Fee Structure: Based on asset value only

2,321	200	Not reported	Actual delivery date	No	Internal STIF	7th of month	10th of following month

Crediting Dividend and Interest Policy: In good funds on pay date plus 2
Fee Structure: Based on combination of asset value and individual services

100	7	25	Contractual settlement date with pending adjustment, actual delivery date	Yes	STIF, variable demand notes, CD's, T-bills, commercial paper	Month-end	3-5 days after month-end

Crediting Dividend and Interest Policy: Income anticipation system on payable date
Fee Structure: Based on combination of asset value and individual services

2,200	10-25 relationships	3-16	Trade date (full accrual), contractual settlement date, contractual settlement date with pending adjustment, actual delivery date	Yes	Bank of America STIF, money market investments	1st business day of month	5th-10th business day

Crediting Dividend and Interest Policy: In clearinghouse funds on payable date
Fee Structure: Based on combination of asset value and individual services

18	18	18	Trade date (full accrual), contractual settlement date with pending adjustment, contractual settlement date	No	Demand notes, commercial paper, short-term money market reserve fund	2nd business day of month	3 weeks after year-end

Crediting Dividend and Interest Policy: Preposted on payable date
Fee Structure: Based on combination of asset value and individual services

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
The Bank of New York **48 Wall Street-3A** **New York, NY 10015** **Contact:** Richard R. Smith/ V.P. 212/530-1353	39	41	$3,250	$350	$6,600	$10,200
	Services Provided: Performance measurement, portfolio analysis, portfolio review, securities lending, ERISA disclosure assistance, benefit disbursement, global custody, on-line inquiry, option accounting, pension consulting services					
Bank of Oklahoma, N.A. **P.O. Box 2300** **Tulsa, OK 74192** **Contact:** Phillip J. Owings/ V.P. & T.O. 918/588-6443	4	15	$300	$346.1	$264.8	$1,115.7
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement, automatic cash management, GIC's					
Bank One of Akron, N.A. **1115 South Main Street** **Akron, OH 44301** **Contact:** Howard W. Cable, Jr./S.V.P., T.O. & Sec. 216/375-1864	0	60	0	$37.7	$2.8	$40.5
	Services Provided: Portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
Bankers Trust Co. **280 Park Avenue** **New York, NY 10017** **Contact:** Lynne Stewart Minard/V.P. 212/850-2082	86	111	$33,300	$6,500	$55,000	$50,000
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, market inventory fund, global custody, DECRA, 401(k), PAYSOP, active and passive equity and fixed-income investment services					
Bishop Trust Co., Ltd. **P.O. Box 2390** **Honolulu, HI 96804** **Contact:** Daniel P. Zaehring/ V.P. & Mgr. 808/523-2111	74	200	$40	$30	$110	$180
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement, plan design consulting					
The Boston Co., Inc. **One Boston Place** **Boston, MA 02106** **Contact:** C. Edward Broom/ S.V.P. 617/722-7000	19	107	$11,125	$440	Not reported	$11,565
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, on-line analytical timesharing, traditional and alternative investment management					
Centerre Trust Co. of St. Louis **510 Locust Street** **St. Louis, MO 63101** **Contact:** James R. Janetz/ A.V.P., Nat'l Pension Dev. 314/231-9300	9	25	$700	$200	$300	$3,200
	Services Provided: Performance measurement, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, CRT inquiry capability, annual report for management and auditing					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
43	10	5-10	Trade date (full accrual), contractual settlement date with pending adjustment, contractual settlement date, actual delivery date	Yes	Master notes, STIF — domestic and foreign	Daily	2-15 days
Crediting Dividend and Interest Policy: In Fed funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
48	12	1	Contractual settlement date	No	In-house STIF, master notes, money funds, commercial paper, T-bills, CD's	2nd of month	2-7 business days after month-end
Crediting Dividend and Interest Policy: Automatic computer credit on payable date **Fee Structure:** Based on combination of asset value and individual services							
147	147	147	Actual delivery date	No	Shearson Loeb Rhodes institutional money market funds	10th of month	Within 1 month after final contribution and employee census data received
Crediting Dividend and Interest Policy: Cash upon receipt **Fee Structure:** Based on combination of asset value and individual services							
681	5	8-10	Trade date (full accrual), contractual settlement date available, actual delivery date used in trade date reports	Yes	Master notes, commercial paper, CD's, repos	Day after month-end	Transactions — 3 days after period-end; asset reports — 6 days after period-end; performance reports — 12 days after period-end
Crediting Dividend and Interest Policy: On payable date in same day funds **Fee Structure:** Based on combination of asset value and individual services							
65	150	38	Contractual settlement date with pending adjustment	No	Money market fund, commercial paper, repos, CD's	Maturity date	Transactions — 3rd business day; asset value reports — 10th business day after month-end
Crediting Dividend and Interest Policy: On payable date **Fee Structure:** Based on combination of asset value and individual services performed							
219	1-5 depending on size and complexity	14	Trade date (full accrual)	Yes	U.S. gov't guaranteed securities, prime commercial paper, money market CD's & BA's, short-term gov't obligation notes	Accrued daily, credited monthly	Accounting — 8 business days; performance — 13 business days; analytics — 15 business days following period-end
Crediting Dividend and Interest Policy: In Fed funds or clearinghouse funds, depending upon income category, on payable date **Fee Structure:** Based on combination of asset value and individual services							
59 managed accts., 180 plans	6	Not reported	Trade date (full accrual), contractual settlement date	Yes	In-house STIF	2nd of month	5-7 business days
Crediting Dividend and Interest Policy: Computer system credit for immediate investment on payment date **Fee Structure:** Based on combination of asset value and individual services							

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
Central Jersey Bank & Trust Co. **639 Rt. #18 & Arthur Street** **East Brunswick, NJ 08816** **Contact:** Gene R. Smith/ Pension T.O. 201/254-0123	0	8	0	$9.4	0	$42
	Services Provided: Performance measurement, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
The Chase Manhattan Bank, N.A. **1211 Avenue of the Americas, 33rd Floor** **New York, NY 10036** **Contact:** Richard T. McSherry/ V.P., Mktg. Svcs. 212/730-3792	80*	118	$53,000	$2,100	$15,000	$68,700
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, market inventory fund, global custody, multi-currency valuation, international performance measurement and analysis, on-line reporting, international index fund, consulting, group IRA and 401(k) *Includes master custody clients.					
Citibank, N.A. **One Citicorp Center** **153 East 53rd Street** **New York, NY 10043** **Contact:** Jeffrey L. Maier/V.P. 212/559-1523	24	76	$17,500	$2,100	$2,600	$22,200
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, market inventory fund, global custody, multi-currency reporting, recordkeeping for 401(k) plans, EFT benefit payments, on-line reporting, customized reporting					
The Citizens & Southern National Bank **33 North Avenue, N.E., 10th Floor** **P.O. Box 4114** **Atlanta, GA 30302** **Contact:** Edgar R. Smith/V.P. 404/581-3617	15	60	$450	$550	$2,500	$3,500
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement					
Citytrust **961 Main Street** **Bridgeport, CT 06601** **Contact:** Mr. Leslie Revzon/ A.V.P. & Mgr. 201/384-5538	1	15	$26	$39	$16	$154
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement					
Commerce Bank of Kansas City, N.A. **922 Walnut** **Kansas City, MO 64141** **Contact:** Joseph A. Burkart/ V.P. 816/234-2551	3	91	$50.2	$459.9	$29.0	$685.1
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement, automatic cash management					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
10	10	10	Contractual settlement date	No	T-bills, short-term money funds	Monthly	Within 10 days

Crediting Dividend and Interest Policy: In cash as received
Fee Structure: Based on combination of asset value and individual services

914	5	30	Trade date (full accrual), contractual settlement date, contractual settlement date with pending adjustment, actual delivery date	Yes	Chase domestic STIF, Chase int'l STIF, T-bills, master notes, commercial paper, repos	Last day of month	7-10 business days

Crediting Dividend and Interest Policy: In Fed funds on payable date
Fee Structure: Based on individual services performed

425	15	25	Trade date (full accrual), contractual settlement date	Yes	Liquid reserve fund, STIF, demand notes	Mid-month, month-end	5 business days after receipt of information

Crediting Dividend and Interest Policy: Payable date plus one for clearinghouse funds, payable date for Fed funds, in good funds available for reinvestment
Fee Structure: Based on combination of asset value and individual services

400	125	12	Trade date, contractual settlement date with pending adjustment, contractual settlement date, actual delivery date	Yes	Pooled money market fund, Federated, vans, cash management fund	Payable date	10 business days

Crediting Dividend and Interest Policy: Immediate cash credit to account on payable date
Fee Structure: Based on combination of asset value and individual services

24	5	Not reported	Trade date (full accrual)	Yes	Institutional liquid assets and Federated short-term	4th-5th business day	7th business day after period-end

Crediting Dividend and Interest Policy: Upon receipt
Fee Structure: Based on combination of asset value and individual services

98	52	10	Trade date (full accrual), contractual settlement date with pending adjustment	No	Master notes, liquid asset fund, gov't securities, CD's, commercial paper, gov't notes, Treasury fund	First business day of month	Master trusts — 10th; directed trusts — 15th

Crediting Dividend and Interest Policy: Automatic credit via trust system on payable date
Fee Structure: Based on combination of asset value and individual services

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
Continental Illinois National Bank and Trust Co. of Chicago **30 North LaSalle Street** **Chicago, IL 60693** **Contact:** Thomas H. Ransom/V.P. 312/828-7537	34	42	$6,350	$380	$14,540	$24,834
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, asset/liability modeling, electronic mail/remote inquiry, automated cash management					
Crocker National Bank **333 South Grand Avenue** **Los Angeles, CA 90071** **Contact:** Stephen McDonald/S.V.P. 213/253-3223	135	434	$6,724* (12/31/81)	*	*	$7,800
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement *Includes directed trusts and custodial.					
East Wisconsin Trustee Co. **1000 Franklin Street** **Manitowoc, WI 54220** **Contact:** James A. Noffke/V.P. 414/682-0101	0	15	0	$4	$5	$80
	Services Provided: Portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
Fidelity Bank **Broad and Walnut Streets** **Philadelphia, PA 19109** **Contact:** Martin Offenberg/V.P. 215/985-8147	1	30	$250	$275	$25	$1,400
	Services Provided: Participant recordkeeping, ERISA disclosure assistance. benefit disbursement					
Fiduciary Trust Co. of New York **Two World Trade Center** **New York, NY 10048** **Contact:** Barbara Marcin/New Bsns. 212/466-4100	4	13	$38	$33	$3,000	$4,000
	Services Provided: Performance measurement, portfolio analysis, portfolio review, securities lending, ERISA disclosure assistance					
The Fifth Third Bank **Trust Department #00850** **Fifth Third Center** **Cincinnati, OH 45263** **Contact:** Stephen E. Root/T.O. 513/579-5493	0	24	0	$34.4	$68.5	$531.7
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, benefit disbursement					
First City Bank of Dallas **P.O. Box 50688** **Dallas, TX 75250** **Contact:** David A. Sharp/V.P. & T.O. 214/655-8049	7	10	$200	$150	$175	$335
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
314	18-22	15	Trade date (full accrual), contractual settlement date with pending adjustment, contractual settlement date, actual delivery date	Yes	STIF, master notes, open time deposits	1st of month	Investment review and cash/activity statements within 5 business days, fund accounting schedules within 30 business days
Crediting Dividend and Interest Policy: In Fed funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
1,736 (avg.)	16	Not reported	Contractual settlement date, trade date (full accrual) available	Yes	CNB STIF, individual securities, other money market funds	Month-end	10th business day after month-end
Crediting Dividend and Interest Policy: In good funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
Not reported	Not reported	Not reported	Contractual settlement date	No	Money market funds	2nd business day of month	15 days after period-end
Crediting Dividend and Interest Policy: Wire transfer on payment date plus 1 **Fee Structure:** Based on combination of asset value and individual services							
55	10-15	Not reported	Trade date, contractual settlement date, actual delivery date	No	STIF, money market funds, T-bills	4th of following month	10-15 days after month-end
Crediting Dividend and Interest Policy: Cash on payable date **Fee Structure:** Based on combination of asset value and individual services							
46	Not reported	Not reported	Trade date, contractual settlement date with pending adjustment	Yes	Master notes, repos, money market funds	Daily	Daily, weekly, or monthly
Crediting Dividend and Interest Policy: Credit to account on payable date **Fee Structure:** Based on combination of asset value and individual services							
Not reported	18 (directed) custodial	15 (separately invested)	Contractual settlement date	No	Master demand notes, T-bills, commercial paper, STIF	1st business day of month	10 days after period-end
Crediting Dividend and Interest Policy: Credit account on payable date **Fee Structure:** Based on combination of asset value and individual services							
13	75	100	Contractual settlement date	No (settlement date credited)	Short-Term Investment Co. (STIC)	No later than 3rd business day	Monday after 1st weekend of month
Crediting Dividend and Interest Policy: Posted to account in cash on payable date + 1 **Fee Structure:** Based on combination of asset value and individual services							

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
First City National Bank of Houston **909 Fannin Street** **P.O. Box 809** **Houston, TX 77001** **Contact:** Terry Lambert/V.P. 713/658-6705	5	62	$582	$968	$1,300	$3,100
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
First Interstate Bank of Casper, N.A. **Trust Department** **P.O. Box 40** **Casper, WY 82602** **Contact:** John McAteer/V.P. & T.O. 307/235-4201	0	24	0	$4.0	$10.0	$30.3
	Services Provided: Portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
First Interstate Bank of Washington, N.A. **P.O. Box 21927** **Seattle, WA 98111** **Contact:** Richard Thorvilson/ T.O. 206/292-3731	0	26	0	$50.4	$119.5	$406.9
	Services Provided: Participant recordkeeping, securities lending, benefit disbursement					
First National Bank & Trust of Marquette **101 West Washington Street** **Marquette, MI 49855** **Contact:** Harold N. Herlich, Jr./S.V.P. & T.O. 906/228-7900	0	84	0	$8	$7	$14.5
	Services Provided: Portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
First National Bank & Trust Co. of Oklahoma City **120 North Robinson** **Oklahoma City, OK 73125** **Contact:** Bud Burch/V.P. 405/272-4229	0	8	0	$307.5	0	$1,530
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement					
The First National Bank of Chicago **Three First National Plaza, Suite 0150** **Chicago, IL 60670** **Contact:** Daniel J. Lenckos/ V.P. 312/732-7704	36	32	$3,800	$170	$2,300	$9,500
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, asset allocation, universe comparison, plan accounting					
The First National Bank of Kansas City **10th and Baltimore** **P.O. Box 38** **Kansas City, MO 64183** **Contact:** Lyle W. Brizendine/ V.P. 816/221-2800	0	2	0	$165	$350	$600
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
75	13	15	Contractual settlement date	No	Short-Term Investment Co. — registered security	Daily with monthly posting	Within 10 business days of month-end
Crediting Dividend and Interest Policy: Credited to account on contractual settlement date **Fee Structure:** Based on combination of asset value and individual services							
112	150	150	Not reported	No	None	Monthly	5-10 days
Crediting Dividend and Interest Policy: Automatic credit through holder's list on payment date **Fee Structure:** Based on combination of asset value and individual services							
17	9	0	Actual delivery date	No	Federated master trust, First Interstate STIF	Month-end	10 days after month-end
Crediting Dividend and Interest Policy: Cash on contractual due date **Fee Structure:** Based on combination of asset value and individual services							
552	28	Not reported	Actual delivery date	Nc	Federated master trust, short-term U.S. gov't securities	1st of month	30-60 days after year-end reporting
Crediting Dividend and Interest Policy: Released into account **Fee Structure:** Based on asset value only							
185	70	100	Contractual settlement date	No	T-bills, BA's, repos, CD's, commercial paper, master notes, STIF	2nd business day	10th business day
Crediting Dividend and Interest Policy: Credit to account on payment date **Fee Structure:** Based on combination of asset value and individual services							
204	12	20	Trade date (full accrual)	Yes	STIF	3rd business day after month-end	8-10 business days after month-end
Crediting Dividend and Interest Policy: Good funds invested on payable date **Fee Structure:** Based on combination of asset value and individual services							
270	90	3-4	Contractual settlement date	Yes	Federated master trust, Federated short-term gov'ts, direct commercial paper	4th-5th business day of month	7-10 days after reporting period-end
Crediting Dividend and Interest Policy: Automatically credited on payable date **Fee Structure:** Based on combination of asset value and individual services							

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
First National Bank of Maryland **25 S. Charles Street** **Baltimore, MD 21201** **Contact:** Howard E. N. Wilson/V.P. 301/244-4630	3	0	$16	0	$3,266	$3,281.7
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, benefit disbursement					
First National Bank of Minneapolis **120 South Sixth Street** **Minneapolis, MN 55480** **Contact:** Thomas S. Kalbrener/Corp. T. Mktg. O. 612/370-4474	6	95	$200	$600	$2,078	$2,078
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund					
First Pennsylvania Bank, N.A. **15th and Chestnut Streets** **Philadelphia, PA 19101** **Contact:** James M. Cleary/ V.P. 215/786-8708	4	40	$400	$450	Not reported	$1,500
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
First Trust Co. of St. Paul **W-555 First National Bank Building** **St. Paul, MN 55101** **Contact:** Roger R. Schaeffer/ V.P. 612/291-5072	5	25	$900	$300	$2,000*	$2,000**
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, TUCS universe comparisons *Includes trusteed accounts **Includes master and directed trusts					
First Union National Bank of North Carolina **First Union Plaza TRST-16** **Charlotte, NC 28288** **Contact:** Peter R. Nagle/V.P. 704/374-6152	6	26	$45	$678	$716	$1,689
	Services Provided: Performance measurement, portfolio analysis, participant recordkeeping, benefit disbursement, GIC selections, options custody, securities lending					
First Vermont Bank and Trust Co. **215 Main Street** **P.O. Box 823** **Brattleboro, VT 05301** **Contact:** Michael H. Venuti, Jr./S.V.P. & S.T.O. 802/254-8711	0	100	0	$27.7	0	$27.7
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
25*	75-100**	2	Actual delivery date	No	Managed accounts — in-house STIF; custody accounts — money market funds	Approx. 5 days after month-end	Monthly statements — 21 days; annual statements — 45 days

Crediting Dividend and Interest Policy: On payable date
Fee Structure: Based on combination of asset value and individual services
*Includes custodial.
**Institutional, personal, and employee benefits.

100	15-40	15-40	Trade date (full accrual), contractual settlement date	No	Master notes, CD's, T-bills, commercial paper, pooled short-term funds	3rd business day after month-end	3rd business day after month-end

Crediting Dividend and Interest Policy: On payable date
Fee Structure: Based on combination of asset value and individual services

58	20	20	Trade date (full accrual), contractual settlement date with pending adjustment, contractual settlement date, actual delivery date	Yes	CD's, repos, STIF, commercial paper, Treasury obligations, master notes	Earned daily; credited 1st of following month	By 15th of following month

Crediting Dividend and Interest Policy: In clearinghouse funds on payable date
Fee Structure: Based on combination of asset value and individual services

60	Not reported	Not reported	Trade date (full accrual)	Yes	Federated master trust, in-house STIF, other short-term	3rd business day after month-end	10th business day after month-end

Crediting Dividend and Interest Policy: In Fed funds on payable date
Fee Structure: Based on combination of asset value and individual services

65	40	20	Contractual settlement date	Yes	Internal daily fund, master notes	Month-end or at time of sale	Investment reviews — 2 weeks; accountings — 4 weeks

Crediting Dividend and Interest Policy: On payable date
Fee Structure: Based on combination of asset value and individual services

14	50	14	Actual delivery date	Yes	Short-term U.S. gov't fund	Usually 10th of following month	30-90 days

Crediting Dividend and Interest Policy: Wired funds maximum of 3 days after payable date
Fee Structure: Based on combination of asset value and individual services

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
First Wisconsin Trust Co. **777 East Wisconsin Avenue** **P.O. Box 2054** **Milwaukee, WI 53201** **Contact:** A. Paul Jones/V.P. 414/765-4444	22	130	$900	$300	$550	$767*
	Services Provided: Performance measurement, portfolio analysis, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, bond immunization, bond dedication, real estate fund *Discretionary.					
First Wyoming Bank, N.A.-Cheyenne **Trust Department** **P.O. Box 648** **Cheyenne, WY 82001** **Contact:** Darryl G. Gaines/S.V.P. & T.O. 307/634-5961	0	11	0	$4.5	0	$4.5
	Services Provided: Portfolio analysis, portfolio review, participant recordkeeping, benefit disbursement					
Florida National Banks of Florida, Inc. **General Mail Center** **214 Hogan Street** **Jacksonville, FL 32231** **Contact:** Barry Robertson/Mgr., Pension Trust Div. 904/359-5315	1	58	$11.6	$42.5	$164.3	$330
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, collective funds — one fixed and one equity					
Fourth National Bank & Trust Co., Wichita **P.O. Box 1122** **Wichita, KS 67201** **Contact:** P. C. Woodward/V.P. & T.O. 316/261-4444	1	18	$31.3	$21.7	$.2	$394.6
	Services Provided: Performance measurement (manual), portfolio review, benefit disbursement					
Guaranty Trust Co. of Canada **366 Bay Street** **Toronto, Ont. M5H 2W5** **Contact:** P. Diane Thomas/Nat'l Mgr., Mktg., Pension Adm. Svcs. 416/863-5168	12	34	$513.5	$128.7	$3.9	$646.1
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, benefit disbursement					
Harris Trust and Savings Bank **111 West Monroe Street** **Chicago, IL 60690** **Contact:** Francis T. Stack/A.V.P. 312/461-2121	34	69	$12,400	$476	$4,900 (est.)	$17,776
	Services Provided: Performance measurement, portfolio analysis, participant recordkeeping, securities lending, benefit disbursement, index fund, market inventory fund, ERISA disclosure assistance (report formatted to facilitate filing of 5500)					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
730	17	15	Contractual settlement date with pending adjustment and full income accrual	No	STIF, variable demand notes	5th business day	Financial transactions — 2nd business day; asset lists — 3rd business day; monthly financial reports for each investment mgr. account — 8th-10th business day
Crediting Dividend and Interest Policy: In Fed funds on payment date **Fee Structure:** Based on combination of asset value and individual services							
11	11	11	Trade date (full accrual)	No	Gov'ts, CD's, money market funds	When received	Not reported
Crediting Dividend and Interest Policy: Upon receipt **Fee Structure:** Based on combination of asset value and individual services							
3	15	9	Contractual settlement date with pending adjustment	No	7 money market funds, gov't repos, commercial paper, T-bills, etc.	3rd business day of following month	Not reported
Crediting Dividend and Interest Policy: Automatic credit to account on day after due date **Fee Structure:** Based on combination of asset value and individual services							
24	8	6	Contractual settlement date	No	Federated master trust	Soon as possible after month-end	Accounting and investment reviews within 30 days after cycle-end
Crediting Dividend and Interest Policy: Through direct participation with Depository Trust Co. on payable date plus 1 **Fee Structure:** Based on individual services performed							
60	20	3	Trade date (full accrual), contractual settlement date with pending adjustment, contractual settlement date, actual delivery date	No	Guaranty Trust STIF	1st day after month-end	Cash statement — 5 business days
Crediting Dividend and Interest Policy: Not reported **Fee Structure:** Based on individual services performed							
419	9	70	Contractual settlement date until 1/1/83; trade date (full accrual) after 1/1/83	Yes	Commercial paper, CD's (domestic and Euro), BA's, U.S. gov't & agency issues, repos, demand notes	6th-7th business day of following month	Monthly: Cash — 2-3 business days, capital — 5-7 business days; quarterly reports: 12-15 days; annual reports: 12-15 business days
Crediting Dividend and Interest Policy: In good funds on payable date **Fee Structure:** Based on combination of asset value and individual services							

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
Horizon Trust Co., N.A. **65 Madison Avenue** **Morristown, NJ 07960** **Contact:** Mark C. Hanna/ A.V.P. 201/285-2133	5	20	$10	$12	$80	$100+
	Services Provided: Performance measurement, portfolio analysis, portfolio review, benefit disbursement					
Intrawest Bank of Denver **633 17th Street** **P.O. Box 5825** **Denver, CO 80217** **Contact:** Ruth Roberts/Acct. O. 303/293-2211	5	51	$248	$210	Not reported	$800
	Services Provided: Performance measurement, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
Irving Trust Co. **One Wall Street** **New York, NY 10015** **Contact:** Bartley H. Fleming, Jr./V.P. 212/487-7133	23	85	$8,300 (12/31/81)	$623 (12/31/81)	$177 (12/31/81)	$10,600 (12/31/81)
	Services Provided: Performance measurement, portfolio analysis, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, market inventory fund, Trust Universe Comparison Service (TUCS™), investment management (balanced, equities, fixed, immunized, dedicated), ESOP, TRASOP, PAYSOP trustee					
Jefferson Bank of Peoria **124 Southwest Adams Street** **Peoria, IL 61645** **Contact:** Michael J. Crecco/ A.V.P. 308/672-6183	1	28	$21	$23	$5	$85
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement, automatic cash reinvestment, government money market fund					
Key Trust Co. **60 State Street** **Albany, NY 12207** **Contact:** Paul C. Atkinson/ S.V.P. 518/447-3701	0	35	0	$47	$42	$300
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement, index fund					
LaSalle National Bank **135 South LaSalle Street** **Chicago, IL 60606** **Contact:** James F. Sullivan/ S.V.P. 312/443-2497	5	0	$100+	0	$500	$950
	Services Provided: Performance measurement, participant recordkeeping, benefit disbursement					
Lincoln First Bank, N.A. **Institutional Asset Management Group** **One Lincoln First Square** **Rochester, NY 14643** **Contact:** George H. Elferink/ V.P. & Mgr. 716/258-5255	6	15	$78.8	$13.5	$13.8	$550
	Services Provided: Performance measurement, portfolio review, participant recordkeeping, benefit disbursement					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
35	35	35	Trade date (full accrual)	No	In-house short-term bond fund with maximum maturity of 180 days, Federated money market funds	Monthly	Not reported
Crediting Dividend and Interest Policy: On payable date **Fee Structure:** Based on combination of asset value and individual services							
120	25	60	Trade date (full accrual)	No	Westcore Funds, Inc.	1st of month	15-30 days after period-end
Crediting Dividend and Interest Policy: Credited directly to individual account on payment date **Fee Structure:** Based on combination of asset value and individual services							
215	15 relationships per officer	10-30	Trade date (full accrual) with contractual settlement date posting	Yes	Master notes, Irving Trust collective STIF, money market funds	1st of following month	Within 10 days of reporting period-end
Crediting Dividend and Interest Policy: In cash on payable date **Fee Structure:** Based on combination of asset value and individual services							
29	29	29	Trade date (full accrual)	No	STIF	1st of month	10-14 days after reporting period-end
Crediting Dividend and Interest Policy: Credit to account on payable date **Fee Structure:** Based on combination of asset value and individual services							
187	100	70-80	Trade date (full accrual), contractual settlement date tailored to clients' needs	Yes	8 money market funds, CD's, commercial paper, T-bills, 2 master notes	Month-end	Monthly, quarterly, annually as needed
Crediting Dividend and Interest Policy: Automatic post system **Fee Structure:** Based on combination of asset value and individual services							
35	25	15	Contractual settlement date	Optional	Commercial paper	2nd-3rd of following month	2-3 days
Crediting Dividend and Interest Policy: Credited to account on payable date **Fee Structure:** Based on combination of asset value and individual services							
33	33	2	Contractual settlement date thru 12/31/82, contractual settlement date with pending adjustment effective 1/1/83	No	Various money market instruments	3rd of month	10th business day
Crediting Dividend and Interest Policy: On payable date **Fee Structure:** Based on combination of asset value and individual services							

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
Lincoln National Bank & Trust Co. **116 East Berry Street** **Fort Wayne, IN 46802** **Contact:** Frederic G. Burke, Jr./A.V.P. 219/423-6111	0	12	0	$9	$20	$110
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement, market inventory fund					
Manufacturers Hanover Trust Co. **600 Fifth Avenue** **New York, NY 10020** **Contact:** H. Kennedy Bell/V.P. 212/957-1796	27	46	$7,600	$1,500	$2,500	$16,000*
	Services Provided: Performance measurement, portfolio analysis, securities lending, ERISA disclosure assistance, benefit disbursement, market inventory fund *Includes $4.4 billion discretionary assets.					
Manufacturers National Bank of Detroit **Sixth Floor, 100 Renaissance Center** **Detroit, MI 48243** **Contact:** Alana MacDonald/Bsns. O. 313/222-4070	28	245	$8,200	$210	$1,300	$9,600
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, international investment, real estate, financial futures					
Marine Midland Bank, N.A. **250 Park Avenue** **New York, NY 10177** **Contact:** William P. Gaines/Adm. V.P. 212/949-6507	11	42	$1,570	$880	$70	$2,520
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, market inventory fund					
M&I Marshall & Ilsley Bank **770 North Water Street** **Milwaukee, WI 53202** **Contact:** Morry L. Birnbaum/V.P. 414/765-8187	25	111	$600	$800	$70	$1,200
	Services Provided: Performance measurement, participant recordkeeping, ERISA disclosure assistance, benefit disbursement, economic sectors					
Mellon Bank **Mellon Square, Room 2805** **Pittsburgh, PA 15230** **Contact:** Thomas H. Kalen/V.P. 412/234-3384	33	26	$13,500	$772	$168	$23,500
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, market inventory fund, international custody integrated into reporting capability					
Mercantile-Safe Deposit and Trust Co. **Two Hopkins Plaza** **P.O. Box 2257** **Baltimore, MD 21203** **Contact:** H. Louis French/V.P. 301/237-5551	14	161	$1,855	$286	$1,920	$4,061*
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, investment evaluation services *Total institutional trust assets.					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
103	40	40	Trade date (full accrual)	No	Commercial & gov't money market funds	Daily in $100 increments	Quarterly or as required
Crediting Dividend and Interest Policy: Same day credit through Depository Trust Co. **Fee Structure:** Based on combination of asset value and individual services							
217	12	18	Trade date (full accrual), actual settlement date with pending adjustment including accrued income	Yes	Short-term reserve fund, CD's, repos, demand note	5th business day of following month	15-20 calendar days
Crediting Dividend and Interest Policy: In good funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
283	30	18	Trade date (full accrual), contractual settlement date	Yes	In-house short-term money market, repos	3-4 business days after month-end	Within 6-12 days after close
Crediting Dividend and Interest Policy: Credit to account on payable date **Fee Structure:** Based on combination of asset value and individual services							
146	10	18	Contractual settlement date with pending adjustment	Yes	Marine Midland STIF, master notes, commercial paper, T-bills, CD's	1st business day of following month	7 business days after accounting period-end
Crediting Dividend and Interest Policy: In Fed funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
192	20	Not reported	Contractual settlement date with pending adjustment	Negotiated	STIF, T-bills, master notes, commercial paper, outside money funds	Payable date	5-7 business days after reporting period-end
Crediting Dividend and Interest Policy: On payable date **Fee Structure:** As requested							
750	7	50	Trade date (full accrual)	Yes	Commingled STIF using A-1 and P-1 investments	Earned daily, credited weekly	Monthly, quarterly, and annually; monthly statements available 3rd business day after month-end
Crediting Dividend and Interest Policy: In clearinghouse funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
269	32	43	Trade date (full accrual)	Yes	STIF, master notes, repos, money market instruments	Monthly	Daily, monthly, quarterly, annual reports based on plan sponsor's requirements
Crediting Dividend and Interest Policy: On payment date through account record update **Fee Structure:** Based on asset value and income collected							

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Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
Michigan National Bank **77 Monroe Center** **Grand Rapids, MI 49501** **Contact:** Thomas L. DeFer/ V.P. 616/451-7686	1	11	$14	$24	$18	$217
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
Montreal Trust Pension Services **15 King Street West** **Toronto, Ont. M5H 1B4** **Contact:** N. J. Amos/Mktg. Mgr., Pension Investment Svcs. 416/362-6363	72	272	$1,777	$3,088	Not reported	Not reported
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, benefit disbursement, index fund, market inventory fund					
National Bank of Detroit **611 Woodward Avenue** **Detroit, MI 48226** **Contact:** James T. McManus/ 2nd V.P. 313/225-3221	44	4	$6,119	$167	$56	$9,841
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, market inventory fund, options accounting, remote on-line inquiry					
National Trust Co., Ltd. **21 King Street East** **Toronto, Ont. M5C 1B3** **Contact:** D. D. Landreville/V.P. 416/364-9141	20	100+	$2,000	$2,000	$4,000	$5,000
	Services Provided: Performance measurement, portfolio review, participant recordkeeping, securities lending, benefit disbursement, index fund					
Northern Trust Co. **50 LaSalle Street** **Chicago, IL 60675** **Contact:** Thomas W. Kimen, Jr./S.V.P. 312/630-6000	102	23	$24,200 (8/31/82)	$500	Not reported	Not reported
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, market inventory fund, asset allocation, global custody, securities lending, options accounting, financial futures					
Northwestern National Bank of Minneapolis **Seventh & Marquette Avenue** **Minneapolis, MN 55479** **Contact:** Thomas E. Hatcher/ A.V.P. 612/372-8361	8	62	$545	$600	$311	$1,700
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund					
Oregon Bank **P.O. Box 2808** **Portland, OR 97208** **Contact:** Art Kriegsmann/ A.V.P. 503/222-7777	0	54	0	$18	$30	$48
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
Park National Bank **P.O. Box 511** **Knoxville, TN 37901** **Contact:** Frank B. Gibb/S.V.P. 615/521-5100	0	3	0	$30	Not reported	$60
	Services Provided: Performance measurement, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
3	3	2	Contractual settlement date	No	Money market funds	2nd business day of month	Monthly — within 5 business days; quarterly/annual — 20 business days
Crediting Dividend and Interest Policy: Automatic credit on payable date plus 1 **Fee Structure:** Based on combination of asset value and individual services							
135	3	5	Contractual settlement date	No	BA's, T-bills, CD's	Monthly	15-20 days after reporting period-end
Crediting Dividend and Interest Policy: Automatic crediting on payable date **Fee Structure:** Based on combination of asset value and individual services							
166	6-9	10-15	Trade date (full accrual)	Yes	National Bank of Detroit STIF, master notes, commercial paper, CD's, repos, BA's, T-bills	Earned daily, credited 1st business day of month	Cash statements and inventories within 5 business days; quarterly and annual reports — 15-30 days
Crediting Dividend and Interest Policy: In Fed funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
50+	7	Not reported	Contractual settlement date with pending adjustment	No	Not reported	Not reported	15-25 days
Crediting Dividend and Interest Policy: As received **Fee Structure:** Based on combination of asset value and individual services							
1,130	10	60	Trade date (full accrual) — reporting, contractual settlement date — accounting	Yes	STIF composed of domestic and Eurodollar CD's, Yankee CD's, BA's, commercial paper, overnight repos	3rd business day after month-end	3-5 business days after month-end
Crediting Dividend and Interest Policy: In clearinghouse funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
125	10	3	Contractual settlement date with pending adjustment	No	Internal STIF	4th business day after month-end	Transaction detail — 2 days after month-end, asset statement — 10 days
Crediting Dividend and Interest Policy: In Fed funds on payment date **Fee Structure:** Based on combination of asset value and individual services							
12	40	2	Trade date, contractual settlement date with pending adjustment, actual delivery date	No	Money Market funds, CD's, BA's, commercial paper, other cash equivalents	Daily	Within 2 weeks after closing date
Crediting Dividend and Interest Policy: Automatically credited on payable date **Fee Structure:** Based on combination of asset value and individual services							
2 per account	3	2	Contractual settlement date with pending adjustment	Yes	Federated, ILA	By 4th business day	Within 10 business days
Crediting Dividend and Interest Policy: In Fed funds on payable date **Fee Structure:** Based on combination of asset value and individual services							

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
Pennsylvania National Bank & Trust Co. **One South Centre Street** **Pottsville, PA 17901** **Contact:** James Marconis/T.O. 717/622-4200	0	50	0	$25	0	$25
	Services Provided: Portfolio review, benefit disbursement					
Rainier National Bank **Trust Division** **P.O. Box 3966** **Seattle, WA 98124** **Contact:** Kenneth Carlson/ A.V.P. 206/621-4298	8	24	$643	$586	$770	$1,000
	Services Provided: Portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
RepublicBank Dallas, N.A. **P.O. Box 241** **Dallas, TX 75221** **Contact:** David J. Pittman/V.P. & T.O. 214/653-6506	170 (combined)		$4,000 (combined)		$1,000	$7,500
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, options processing, cash forecasting, TUCS, asset allocation service, automated data transmission, passive fund management, dedicated bond service, government reporting, plan accounting					
Richfield Bank and Trust Co. **6625 Lyndale Avenue South** **Richfield, MN 55423** **Contact:** Jill M. Edelstein/ Empl. Ben. O. 612/861-8321	0	300	0	$39.3	$11.7	$51
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
Royal Trust **P.O. Box 7500, Station "A"** **Toronto, Ont. M5W 1P9** **Contact:** J. A. Gordon/A.V.P. 416/867-2403	30	251	$1,800	$4,800	Not reported	$8,400
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, benefit disbursement, international, real estate, energy investments					
Seattle Trust & Savings Bank **804 Second Avenue, Suite 1800** **Seattle, WA 98104** **Contact:** Dianne L. Brown/V.P. 206/223-2291	0	83	0	$23	$7	$79
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
Simmons First National Bank **P.O. Box 7009** **Pine Bluff, AR 71611** **Contact:** John L. Rush/S.V.P. & T.O. 501/541-1107	1	14	$2.7	$3	0	$34.3
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					

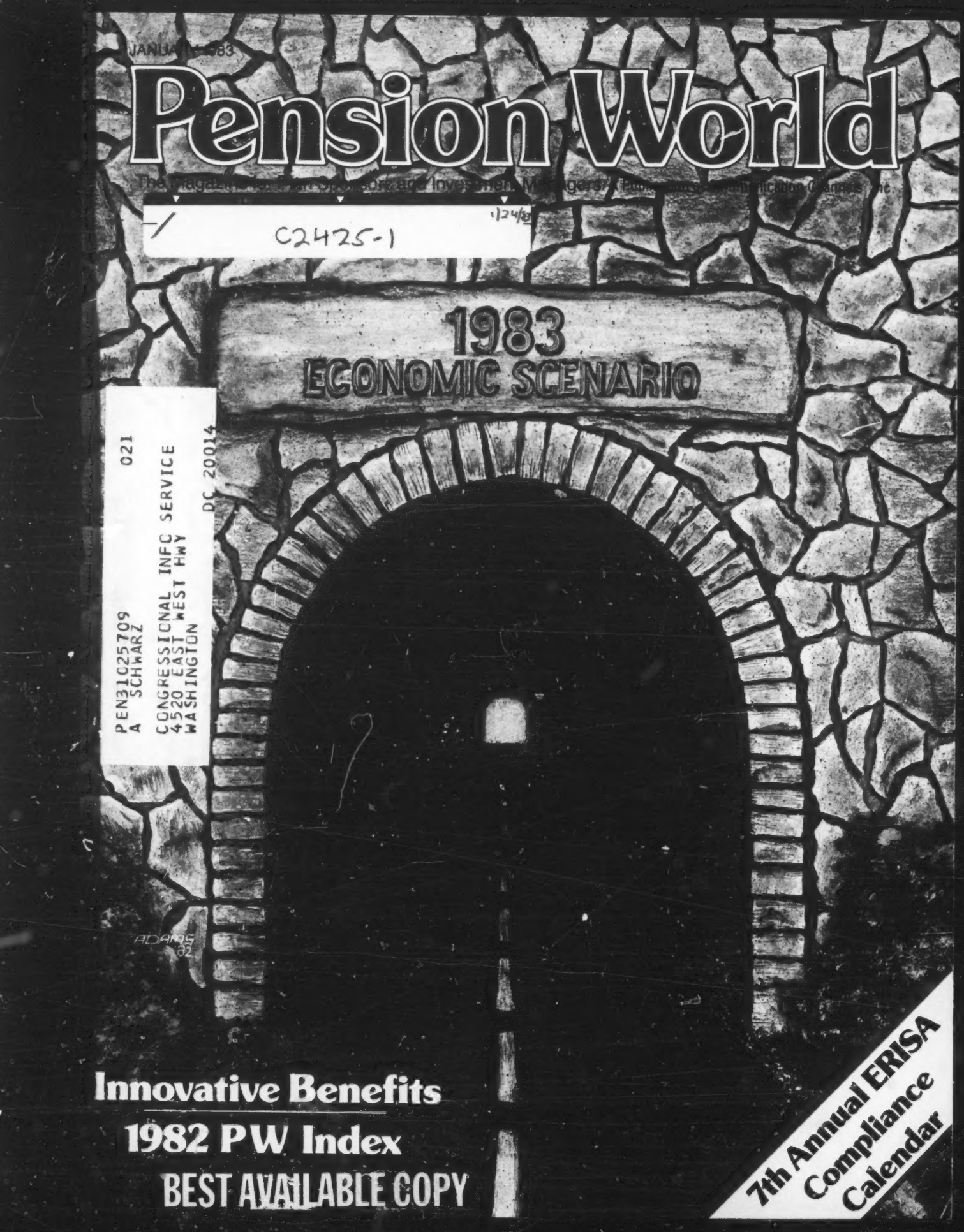
Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
50	15	15	Contractual settlement date	P.O.D. policy negates failures	T-bills, repos, money market funds, bank savings	Month-end plus 1	Month-end plus 3
Crediting Dividend and Interest Policy: Day received plus 1 **Fee Structure:** Based on combination of asset value and individual services							
88	10	15-20 accounts	Contractual settlement date with pending adjustment	Yes	In-house STIF, Federated, ILA, commercial paper, other short-term	1st of month	10 business days
Crediting Dividend and Interest Policy: Pay date plus 1 **Fee Structure:** Based on combination of asset value and individual services							
250	Not exceeding 10 accounts	15	Trade date (full accrual), contractual settlement date with pending adjustment, contractual settlement date, actual delivery date	Yes	Master notes, commercial paper, T-bills, STIF, Eurodollars, repos	1st business day after month-end	5 business days after report date
Crediting Dividend and Interest Policy: In Fed funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
454	100	225	Actual delivery date	No	Money market funds	Cash basis — when received	Statements — 15 days after year-end; full cash accounting within 45 days after year-end
Crediting Dividend and Interest Policy: When received — cash basis accounting system **Fee Structure:** Based on combination of asset value and individual services							
290 (individually managed)	12	8	Contractual settlement date with pending adjustment	No	Short-term notes, T-bills, Royal Trust special deposit account	Last day of month	15-20 days after period-end
Crediting Dividend and Interest Policy: On payable date **Fee Structure:** Based on combination of asset value and individual services							
83	20	20	Actual delivery date	No	Money market funds	1st of month	Statements by 15th day of month following cutoff; allocations and tax filings within 20 days from receipt of info
Crediting Dividend and Interest Policy: Posted to account on payable date **Fee Structure:** Based on individual services performed							
190	190	190	Contractual settlement date	No	Federated, money fund, fund for U.S. Treasury obligations, ILA	1st of month	15 days after closing
Crediting Dividend and Interest Policy: When received **Fee Structure:** Based on combination of asset value and individual services							

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
State Street Bank and Trust Co. **P.O. Box 351** **Boston, MA 02101** **Contact:** J. D. Nelson/V.P. 617/786-6492	73	3	$13,464	$8,434	$8,102 (includes endowments)	$27,730
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, market inventory fund, global, options, on-line, real estate, Universe, PAYSOP/401(K) trustee					
Suburban Bank **6610 Rockledge Drive** **Bethesda, MD 20817** **Contact:** Reeve W. Pratt/T.O. 301/493-2918	0	19	0	$9.1	$30.4	$88.1*
	Services Provided: Performance measurement, portfolio review, participant recordkeeping, benefit disbursement *Includes custodial employee benefit assets.					
Summit & Elizabeth Trust Co. **367 Springfield Avenue** **Summit, NJ 07901** **Contact:** Richard A. Moore/V.P. 201/522-8400	0	5	0	$12	Not reported	$110
	Services Provided: Performance measurement, portfolio analysis					
Texas Commerce Bank **P.O. Box 2558** **Houston, TX 77252** **Contact:** Russell K. Schulze, II/S.V.P. 713/236-5788	8	25	$1,100	$1,200	$2,900	$3,100
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement					
Trust Company Bank **P.O. Box 4655** **Atlanta, GA 30302** **Contact:** Dewey L. Haggard, Jr./V.P. 404/588-7583	11	22	$126.8	$22.8	0	$1,200
	Services Provided: Performance measurement, portfolio analysis, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
Union Bank and Trust Co. of Eastern Pennsylvania **52 West Broad Street** **Bethlehem, PA 18018** **Contact:** Myron Haydt/T.O. 215/861-1769	0	1	0	$.4	$20.3	$40
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
United Missouri Bank of Kansas City, N.A. **10th & Grand Avenue** **P.O. Box 226** **Kansas City, MO 64141** **Contact:** Robert E. Reiter/S.V.P. 816/556-7474	2	350	$6	$200	$300	$950
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
U.S. Trust Co. of New York **45 Wall Street** **New York, NY 10005** **Contact:** Robert Pagano/A.V.P. 212/425-4500	16	90	$1,816	$1,480	$1,741	$5,037
	Services Provided: Performance measurement, portfolio analysis, securities lending, ERISA disclosure assistance, benefit disbursement, risk management, portfolio characteristics					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
600	5	3.5	Trade date (full accrual)	Yes	All those approved by ERISA	2nd business day after month-end	3-5 business days after month-end
Crediting Dividend and Interest Policy: In clearinghouse funds through lock-box, FBE, DTC rebate program **Fee Structure:** Based on combination of asset value and individual services							
69	69	2	Actual delivery date	No	Federated trust, U.S. gov't securities, short-term fund	1st of month	Not reported
Crediting Dividend and Interest Policy: Credit or check on receipt **Fee Structure:** Based on combination of asset value and individual services							
11	50	50	Contractual settlement date with pending adjustment	No	Treasury issues, money market funds	2nd-3rd business day after month-end	Transactions — cycle date plus 1, holdings — cycle date plus 8
Crediting Dividend and Interest Policy: On payable date **Fee Structure:** Based on combination of asset value and individual services							
104	20	3	Actual delivery date	Fail float anticipation	2 STIF's primarily investing in master notes	Month-end	10 business days after month-end
Crediting Dividend and Interest Policy: Automatically credited to account on payable date plus 1 **Fee Structure:** Based on combination of asset value and individual services							
55	5	20	Contractual settlement date	No	STIF, master notes	Within 5 business days after cutoff date	15-20 days after cutoff date
Crediting Dividend and Interest Policy: On pay date **Fee Structure:** Based on combination of asset value and individual services							
62	62	62	Contractual settlement date	No	Federated Investors Services, Inc.	Received via tape via mail	Not reported
Crediting Dividend and Interest Policy: Automated generation on pay date **Fee Structure:** Based on asset value only							
415	100	26	Trade date (full accrual)	No	Pooled debt fund, T-bills, CD's, institutional and short-term money market funds	1st of month	14-21 days after reporting period-end
Crediting Dividend and Interest Policy: In cash, stock dividends on payable date **Fee Structure:** Based on combination of asset value and individual services							
229	18	38	Trade date (full accrual), actual settlement date with pending adjustment	No	U.S. Trust STIF	Monthly within 3 business days	3-14 days, depending on report
Crediting Dividend and Interest Policy: In available funds on payable date **Fee Structure:** Based on combination of asset value and individual services							

Name and Address of Bank	Number of Separate Master Trust Clients	Number of Directed Trust Clients	Master Trust Assets (in millions)	Directed Trust Assets (in millions)	Custodial Employee Benefit Assets (in millions)	Total Employee Benefit Assets (in millions)
United Virginia Bank **P.O. Box 26665** **Richmond, VA 23261** **Contact:** Kenneth L. Walker/ A.V.P. — Pension Trust 804/782-5198	4	66 plans (33 sponsors)	$17	$92	$73	$662
	Services Provided: Performance measurement, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
Valley Fidelity Bank & Trust Co. **P.O. Box 1991** **Knoxville, TN 37901** **Contact:** Sharon Miller/S.V.P. 615/521-3966	0	25	0	$4	0	$63
	Services Provided: Performance measurement, portfolio review, ERISA disclosure assistance, benefit disbursement					
Valley National Bank of Arizona **P.O. Box 71, Trust Employee Benefits Department** **Phoenix, AZ 85001** **Contact:** Lou Kirsch/V.P. 602/261-1545	1	114	$16.9	$49.9	$21.6	$939
	Services Provided: Portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
Virginia National Bank **P.O. Box 3000** **Norfolk, VA 23514** **Contact:** James G. Miller/V.P. 804/441-4064	1	6	$36.1	$39.8	$12.9	$221.0
	Services Provided: Performance measurement, portfolio analysis. portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					
Wachovia Bank & Trust Co. **P.O. Box 3099** **Winston-Salem, NC 27102** **Contact:** Jane B. Fisher/V.P. 919/748-6348	31	45	$5,300	$300	$60	$6,500
	Services Provided: Performance measurement, portfolio analysis, portfolio review, participant recordkeeping, securities lending, ERISA disclosure assistance, benefit disbursement, foreign custody, bond immunization, real estate management					
Wells Fargo Bank (Wells Fargo Investment Advisors) **475 Sansome Street** **P.O. Box 63050** **San Francisco, CA 94163** **Contact:** Roberta P. Lyon/V.P. & Mgr./Master Trust Grp. 415/396-5561	55	1,000	$8,084	$2,500	$3,500	$14,084
	Services Provided: Performance measurement, portfolio analysis, portfolio review, securities lending, ERISA disclosure assistance, benefit disbursement, index fund, market inventory fund, international market fund, value added equity fund, yield tilt market fund, real estate equity fund, asset allocation, multiple manager evaluation, performance evaluation, portfolio structuring, risk measurement & control, on-line master manager™ service					
Winters National Bank and Trust Co. **Winters Bank Tower** **Dayton, OH 45402** **Contact:** C. T. Warriner/V.P. 513/449-8718	10	65	$264	$211	$25	$364
	Services Provided: Performance measurement, portfolio review, participant recordkeeping, ERISA disclosure assistance, benefit disbursement					

Number of Separate Portfolios Maintained	Average Number of Accounts per Account Supervisor	Average Number of Accounts per Investment Mgr. Contact	Accounting System Utilized	Fail Float Credit	Short-Term Instruments Used	Date Interest on Short-Term Fund Credited	Timeliness of Reporting Package
53	13	3	Contractual settlement date with pending adjustment	No	UVB money market fund for trustee accounts, several money market funds for custodial	7th-10th calendar day of following month	Transactions and holdings by 10th of following month
Crediting Dividend and Interest Policy: Interest on payable date; dividends on payable date plus 1 **Fee Structure:** Based on combination of asset value and individual services							
360	180	360	Trade date (full accrual)	No	Money market funds, gov't and T-bills	Month-end	Quarterly
Crediting Dividend and Interest Policy: Through suspense if haven't received, on payable date **Fee Structure:** Based on combination of asset value and individual services							
114	19	57	Contractual settlement date with pending adjustment	No	STIF, commercial paper	1st of following month	As frequently as monthly within 2 weeks after closing
Crediting Dividend and Interest Policy: Not reported **Fee Structure:** Based on combination of asset value and individual services							
16	100	31	Trade date (full accrual)	No	Daily income fund (DIF)	By 3rd business day of following month	2nd business day for priority account; 6th business day for standard accounts; daily for cash management
Crediting Dividend and Interest Policy: In Fed funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
200	5	20	Contractual settlement date with pending adjustment	Yes	Short-term diversified fund, demand notes, commercial paper	1st business day	10 business days
Crediting Dividend and Interest Policy: In Fed funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
450	12	35	Contractual settlement date with pending adjustment, contractual settlement date	Yes	Master notes, CD's, automated daily computerized transfer to money market fund and/or gov't money market fund, direct placement commercial paper	Last day of month; others on payable date	Cash and assets — 5 days; full reports — 10 days
Crediting Dividend and Interest Policy: In good funds on payable date **Fee Structure:** Based on combination of asset value and individual services							
550	140	200	Contractual settlement date	Yes	In-house money market fund with gov't securities	Last day of month	10 business days
Crediting Dividend and Interest Policy: Posted to account on payable date **Fee Structure:** Based on combination of asset value and individual services							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Pension World

January 1983
Volume 19 Number 1

The Magazine for Plan Sponsors and Investment Managers/A Publication of Communication Channels, Inc.

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Cover: **A number of those in the pension arena seem to be taking the middle track at present, looking with hope toward a light at the end of the tunnel. The 1983 economic outlook for pension investing begins on page 13.**

BPA

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Pension World NEWS

VOLUME 19 NUMBER 1 JANUARY 1983

Employees paying more of their health costs

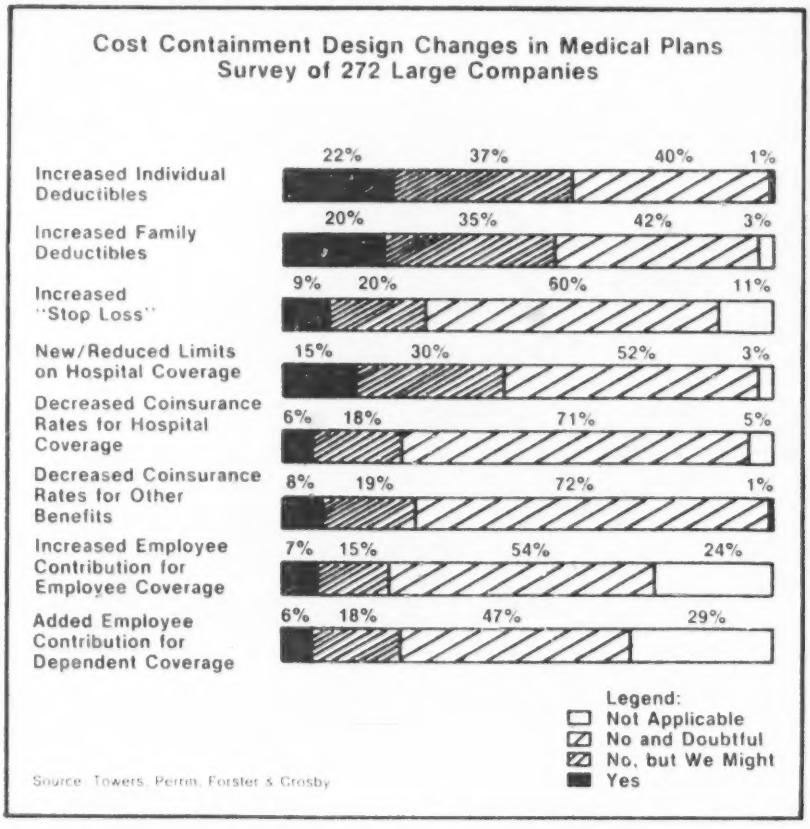
■ Many companies are taking steps to increase their employees' share of health care benefits expenses, according to a survey of 272 large U.S. firms by New York City-based Towers, Perrin, Forster & Crosby.

Twenty-two percent of the companies responding to the survey have increased individual deductibles under their medical plans, and 37 percent are contemplating doing so. Similar percentages of the survey group have increased, or are thinking of increasing, family deductibles.

Seven percent of the companies now require employee contributions for individual coverage under medical plans that had not required such contributions before, and 15 percent more are considering doing so. Similar percentages are considering or require employee contributions for dependent coverage.

More than one-third of the firms that now require their workers to shoulder some portion of health plan costs through contributions or cost-sharing are also liberalizing their medical coverage to make it more attractive. Many are doing so by providing for higher amounts of maximum coverage or stop-loss features that allow for total reimbursement if costs exceed a given amount. New features such as outpatient surgery, payment for second medical opinions, and hospice care for the terminally ill are also being added to help encourage the use of more cost-effective treatment.

To improve their management of health care benefits, 9 percent of the survey companies have appointed and 8 percent are considering appointing a health care manager whose full-time responsibility is the firm's medical plans, including cost containment programs.


Cost Containment Design Changes in Medical Plans
Survey of 272 Large Companies
Increased Individual Deductibles
22% 37% 40% 1%
Increased Family Deductibles
20% 35% 42% 3%
Increased "Stop Loss"
9% 20% 60% 11%
New/Reduced Limits on Hospital Coverage
15% 30% 52% 3%
Decreased Coinsurance Rates for Hospital Coverage
6% 18% 71% 5%
Decreased Coinsurance Rates for Other Benefits
8% 19% 72% 1%
Increased Employee Contribution for Employee Coverage
7% 15% 54% 24%
Added Employee Contribution for Dependent Coverage
6% 18% 47% 29%
Legend:
Not Applicable
No and Doubtful
No, but We Might
Yes
Source: Towers, Perrin, Forster & Crosby

CEBS recognition ceremony held

■ A total of 51 insurance company, employee benefits managerial, and professional advisory firm personnel were named Certified Employee Benefit Specialists (CEBS) at the International Foundation of Employee Benefit Plans' 28th Annual Educational Conference in Montreal.

All qualified for the professional designation by passing a series of 10 college-level exams on employee benefits subjects and by meeting and attesting to a high standard of business and professional conduct.

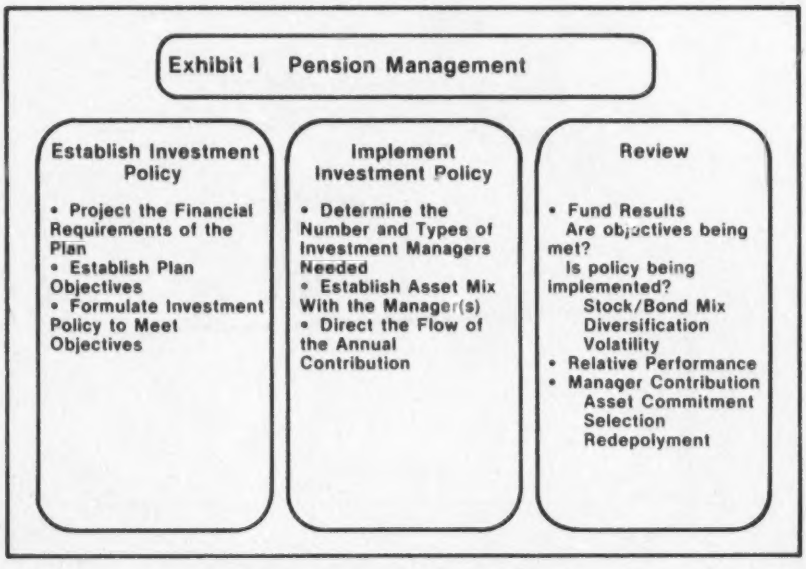
A total of 198 individuals nationwide received their CEBS designations in 1982 from the cosponsors of the program, the Brookfield, Wisc.-based Foundation and the University of Pennsylvania's Wharton School.

A framework for pension investment decision-making

Despite the complexities of pension management, the major decisions that must be made are few:

1. How much of which types of assets should be held in the portfolio?
2. Who should manage how much of which assets?
3. What needs changing when?

In formalizing this pension management process, the first decision has come to be known as *Establishing an Investment Policy*, the second decision as *Implementing an Investment Policy* or *Organizing an Investment Management Team*, and the third as *Review*. The elements of these three key decision processes are highlighted in Exhibit I.



To understand these elements fully, the reader needs to consider that only two factors are pertinent to the economic cost of the pension plan—the *promise* and the *experience*. The promise is the benefit that employees are told they will receive; it is somewhat under the sponsor's control, but it is driven by the competition for human capital. The experience comprises the emerging demographics of the participating population and the performance of fund assets. Experience is also somewhat under the sponsor's control, in that personnel practices affect population demographics, and asset management affects performance and, thus, the ultimate cost of the plan.

Exhibit I summarizes the sponsor's interaction with the promise and the experience as he attempts to control what can be controlled. In *Establishing an Investment Policy*, the sponsor interacts with both the promise and experience to develop a course of action for controlling the costs and value of the plan. In *Implementation*, he interacts with experience to obtain the best management possible to execute the course of action. In *Review*, he again interacts with both the promise and experience to verify that everything is "on track" and to make changes where warranted.

Establishing investment policy

The establishment of an investment policy is the setting of suitable risk and diversification levels for the assets of the plan. Investment policy describes an acceptable course of action for management of plan assets and takes into account both the accruing liabilities of the plan and the risks of the capital markets. It is the cornerstone upon which manager selection and review are built.

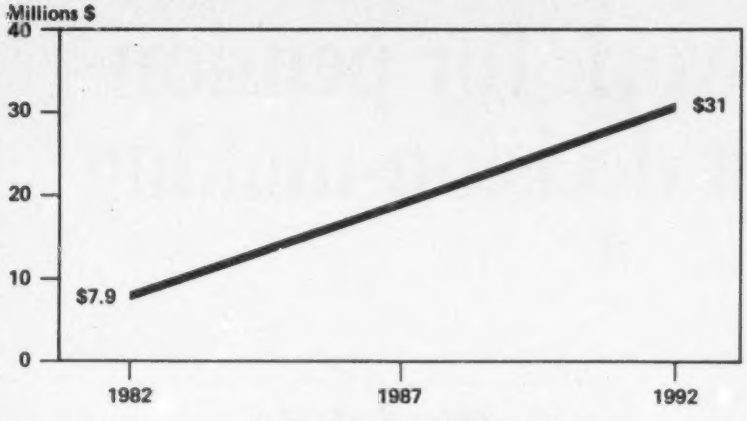
As indicated in the left panel of Exhibit I, the establishment of an investment policy entails 1) projecting the financial requirements of the plan, 2) establishing plan objectives, and 3) formulating an investment policy to meet the objectives.

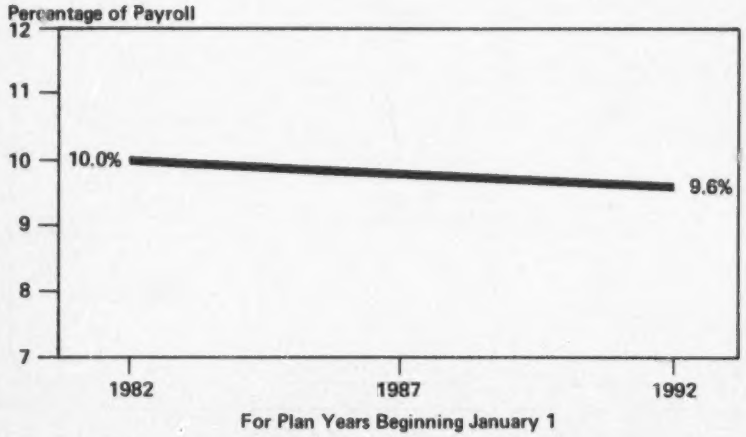
In projecting the *financial requirements* of the plan, the sponsor interacts with both the changing promise and experience to develop estimates of the accruing liabilities and, therefore, the costs of the plan. This element of the policy process is analogous to the forecasting a plan sponsor normally performs for other aspects of his operations.

The input variables of the forecast are the future promise (future benefit levels) and certain experience assumptions, including work force growth and increases in compensation. The outputs from the

by **RONALD J. SURZ**
Vice President
A. G. Becker
Chicago, Ill.

Exhibit II The Trend of Contributions





forecast are future liabilities, benefit payments, and contributions. A sample output is shown in Exhibit II, which graphically illustrates how pension contributions might be forecast. The development of these forecasts is a difficult undertaking because forecasting involves several disciplines, including actuarial, benefit design, legal, accounting, and investment. Despite this complexity, projecting financial requirements is essential to understanding the plan and, hence, to establishing investment policy.

Once the financial requirements of the plan have been forecast, a desired course for the assets and contributions of the plan can be contemplated—that is, *objectives* can be established for funding liabilities and controlling contributions over time. These objectives are developed in view of returns that may be available from the capital markets. Exhibit III, which demonstrates how such objectives may be established, shows the trend of contributions with three alternative investment returns. For example, it should be possible to reduce contributions to 9.6 percent of payroll over 10 years, but a reduction below, say, 8 percent is somewhat unlikely. Once the objectives are established, they become guideposts against which to measure future progress.

Objectives, however, are merely hoped-for events. To guard against severe disappointment in achieving the objectives, a rational course of action must be developed for achieving the objectives. To formulate an *investment policy* to meet the objectives, the sponsor examines the likelihood of achieving the objectives with alternative asset mixes. This may be accomplished through capital market simulations, which allow the sponsor to "pre-experience" the potential range of outcomes that could result from investing in a given asset mix. A specific mix is chosen because it offers an acceptable likelihood of meeting the dual objectives of funding liabilities and controlling contributions. However, a conflict usually occurs here because asset mixes that offer high likelihoods of funding liabilities are typically conservative, while those that offer opportunities for substantial reductions in contributions are typically aggressive. The sponsor makes a tradeoff involving his desire for each, and his appetite for risk, in reaching his decision.

Exhibit IV shows how a simulation approach can allow the sponsor to examine the potential ranges of contributions with various investment policies after a period of 10 years. The bars in the chart show the ranges of contributions—from those that would result from "very poor financial markets" (only a 5 percent likelihood that markets would be worse) to those that would result from "very good financial markets" (95 percent likelihood of less favorable markets).

As can be seen from the exhibit, the median, or "expected," costs (depicted as the solid line in the middle of each bar) decline from left to right. This is because the policies are presented in order of increasing risk, and an investor expects to be compensated for taking greater risks. Similarly, the ranges of contributions (difference between top and bottom of the bars) also increase from left to right, reflecting the greater risk associated with more equity-oriented mixes. The sponsor analyzes distributions of this type both for contributions and funded status to determine which mix is most appropriate for the pension plan. This mix then becomes the investment policy. More appropriately, the investment policy establishes the *maximum* risk permissible in the plan. This risk policy is stated in terms of a maximum commitment to equities and includes guidelines for suitable equity and fixed-income investments.

The next decision is the degree of diversification that is desired in the portfolio. This decision is made in conjunction with the choice of investment manager. A low level of diversification allows the manager to add value, but also allows him to make mistakes. This consideration

should be paramount in implementing the investment policy.

Implementing the policy

Implementing an investment policy means organizing an investment management team to execute the policy. This implementation takes into account the types of asset management available and the sponsor's beliefs concerning where value is most likely to be added. As indicated in Exhibit I, implementing an investment policy entails 1) determining the number and types of investment managers needed, 2) establishing asset mix with the managers, and 3) directing the flow of the annual contribution.

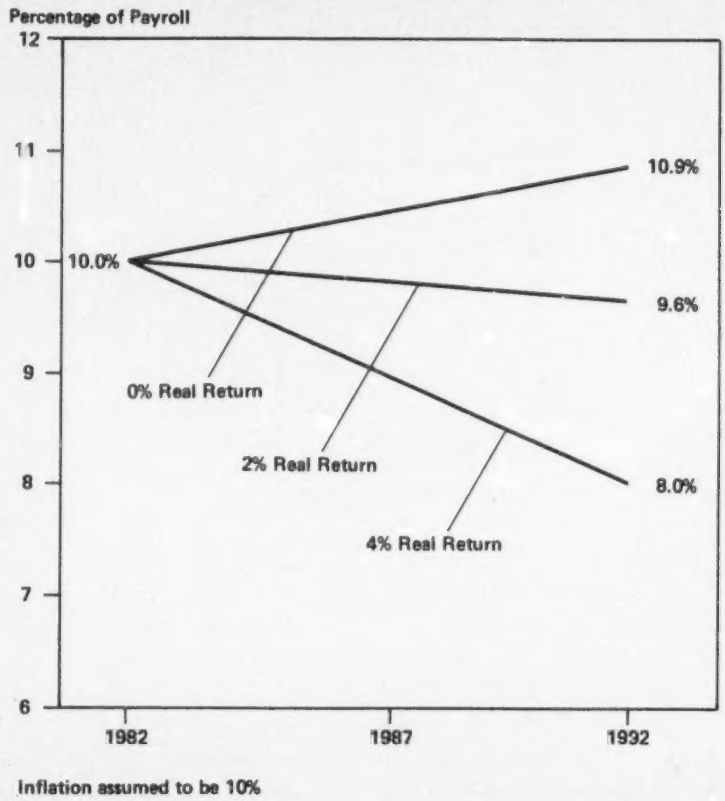
To determine the number and types of *investment managers needed,* the sponsor seeks a cost-effective structure that offers an acceptable likelihood that value will be added in excess of costs. The costs include investment management fees and, more importantly, administrative expenses. Administrative expenses include data collection, monitoring, reporting, decision-making, and meeting with the managers; these expenses are directly affected by the number and types of investment managers employed.

A relatively small plan will probably not be able to cost-justify a multitude of highly specialized managers, whereas a large plan might.

To see how practice bears out this supposition, we have abstracted from the 1981 *Money Market Directory* the number of managers employed by plans of various sizes. Exhibit V tabulates the percentage of plans using various numbers of managers for given plan sizes. As can be seen, small plans tend to employ fewer managers than do large plans. For example, 74 percent of plans with $1 million to $5 million in assets employ only one manager, whereas 66 percent of plans over $1 billion employ at least six managers. Another reason that the number of managers increases with plan size is that large plan sponsors, having chosen to manage more aggressively, have elected a more segmented and specialized approach.

In addition to the number of managers, the types of managers needed are also related to plan size. The sponsor of a small plan, for example, may tend to seek out a smaller investment institution (if it meets minimum investment requirements) because he believes that his assets will get greater attention there. Large plans, on the other hand, are not hampered by this consideration and often choose to employ both large and small institutions.

Exhibit III The Effect of Investment Returns on Contributions to the Plan

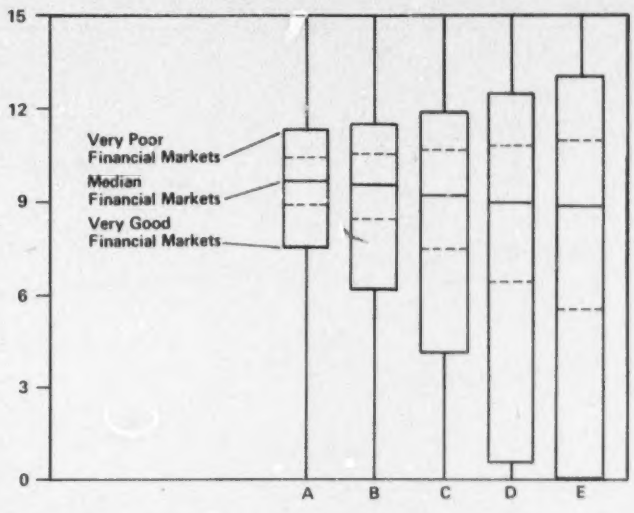


In addition to manager size, the use of specialists versus generalists may also be affected by plan size. Generalist managers are hired to manage the entire investment opportunity set and to make pricing decisions with regard to which asset classes should be emphasized within policy guidelines; the sponsor need not decide how to allocate assets along the opportunity set (beyond his policy statement, of course). By contrast, specialty managers concentrate in given segments of the investment opportunity set and make pricing decisions within those segments; the sponsor must decide how to allocate assets among the managers and, hence, among the segments. Thus, the usage of specialty managers requires more involvement on the part of the sponsor and, therefore, costs more of the sponsor's time. This implies that smaller plans, rather than large plans, should find it more cost-effective to use generalist, or balanced, managers.

To verify this implication, we have examined the usage of specialists and generalists among plans in the 1981 *Money Market Directory.* Exhibit VI tabulates the percentage of plans using different combinations of specialists and generalists for given plan sizes. As can be seen from the exhibit, small plans tend to employ generalists, while large plans tend to use specialists. For example, 28 percent of plans in the $3 million to $5 million range employ one balanced manager, and over 30 percent employ one insurance company (considered specialist managers in the exhibit). By contrast, 70 percent of plans in the $1.5 billion to $2 billion range employ both multiple specialists and multiple generalists.

In determining investment man-

Exhibit IV **The Probable Ranges of Contributions After 10 Years with Different Investment Policies**



			A	B	C	D	E
The Probability	5%	(Very Poor)	11.2%	11.4%	11.9%	12.5%	13.1%
of Contributions	25		10.3	10.4	10.5	10.6	10.7
Exceeding	50	(Median)	9.7	9.5	9.2	8.9	8.7
the Percentages	75		8.9	8.3	7.5	6.4	5.6
of Payroll Shown	95	(Very Good)	7.5	6.2	4.2	0.7	0.0

A: 10% Treasury Bills, 90% Bonds
B: 10% Treasury Bills, 65% Bonds, 25% Stocks
C: 10% Treasury Bills, 40% Bonds, 5% Real Estate, 45% Stocks
D: 10% Treasury Bills, 15% Bonds, 8% Real Estate, 67% Stocks
E: 10% Treasury Bills, 10% Real Estate, 80% Stocks

agers needed, other considerations include geographic location, institution type (bank, counselor, or insurance company), organization, philosophy (top-up, bottom-down, etc.), personnel, turnover, etc. Once the criteria for manager selection have been established, a list of candidates that meet the criteria can be prepared and the candidates reviewed. In the end, the list of candidates will be narrowed to the finalists from which the management team is selected. Once this team is in place, assets must be allocated to the members.

In establishing *asset mix* with the managers, the sponsor considers 1) his investment policy, 2) his confidence in the individual investment managers, and 3) his confidence in his own ability to forecast security price movements. Investment policy guidelines establish in broad terms how assets should be allocated between equities and fixed income.

Exhibit V **Number of Managers per Sponsor (By Total Retirement Asset Size)**

Sponsor Assets ($ millions)	Total No. of Sponsors	1 Mgr.	2 Mgrs.	3 Mgrs.	4 Mgrs.	5 Mgrs.	More Than 5 Mgrs.
1-5	4282	74%	20%	4%	1%	5%	5%
5-10	1206	51%	30%	11%	5%	1%	2%
10-30	1168	32%	29%	17%	11%	5%	6%
30-50	371	23%	23%	15%	14%	8%	17%
50-100	327	14%	17%	14%	12%	9%	33%
100-250	334	7%	12%	12%	11%	10%	48%
250-500	149	3%	9%	6%	7%	12%	63%
500-1,000	80	5%	10%	8%	0%	4%	73%
Over 1 Bill	94	6%	9%	10%	6%	3%	66%
	8011	54%	22%	8%	5%	3%	8%

Information Source: 1981 *Money Market Directory*

If the sponsor has little confidence in his own forecasting ability, the initial allocation should be at a neutral risk exposure (*e.g.*, if the policy is no more than 70 percent in equities with an expected average exposure of 50 percent, a neutral allocation would be 50 percent in equities).

With regard to his confidence in his individual investment managers, the sponsor will tend to allocate more assets where there is more confidence, but he will temper this tendency by considering the diversification effects of allocating too much or too little to individual managers. For example, Manager 1 might be the world's best growth stock manager, but the fund could still suffer substantial losses if growth stocks fall out of favor. The sponsor guards against this eventuality by only slightly overweighting this manager, relative to the market as a whole.

With regard to the sponsor's confidence in his own forecasting ability, the sponsor will allocate to a non-neutral equity commitment (within policy guidelines) if he is confident in his market forecast; he will weight equities more heavily if he believes that equities will outperform fixed income, and he will weight fixed income more heavily if he believes fixed income will outperform equities. Similarly, if the sponsor believes that certain sectors of the equity or fixed-income markets will provide superior performance, he will overweight these sectors.

Weighting decisions of this type and *strategic* moves and should not be confused with *policy;* all such moves should be within policy guidelines. If the sponsor does not believe he has any particular insights, he will tend to allocate to a neutral equity commitment with market-like weightings in security sectors.

This same decision framework applies to directing the flow of *annual contributions.* Even if the initial allocation is to a neutral position, market movements may cause policy limits to be reached, and management contribution may cause certain sectors to be over- or underweighted. The sponsor can use his cash flows to "correct" any such imbalances and/or to direct funds to the markets that he be-

Exhibit VI Type of Manager by Asset Size

Asset Size Group In Millions	Total # of Sponsors In Asset Group	Percentage of Sponsors Having 1 Specialist	1 Balanced	1 Each	1 Specialist Multi-Balanced	Multi-Specialist 1 Balanced	Multi-Both	Multi-Balanced	Multi-Specialist
3-5	486	39.0	28.3	16.2	.5	1.6	.7	2.5	11.2
5-10	494	21.0	27.8	17.8	1.1	4.9	1.3	12.0	14.1
10-20	343	13.7	26.5	11.9	3.8	8.3	4.2	18.8	12.8
20-40	293	5.4	18.1	11.9	7.2	14.5	6.2	19.9	16.8
40-60	127	2.5	11.0	10.2	11.8	15.7	14.2	15.7	18.9
60-80	78	2.7	9.5	2.7	4.1	10.8	27.0	24.3	18.7
80-100	63	—	10.0	10.0	6.7	6.7	23.3	23.3	20.0
100-200	168	1.8	5.5	4.3	9.1	18.3	24.4	14.0	22.6
200-400	113	—	.9	1.8	10.7	22.3	27.7	14.3	22.3
400-600	29	—	3.6	—	7.1	10.7	57.1	—	21.5
600-800	21	—	—	5.0	5.0	20.0	50.0	10.0	10.0
800-1000	15	—	—	—	—	41.2	41.2	—	17.6
1000-1500	10	—	10.0	—	—	10.0	30.0	10.0	40.0
1500-2000	10	—	—	—	—	—	70.0	30.0	—
2000-3000	9	—	12.5	—	6.2	31.3	12.5	6.2	31.3

Information Source: 1981 *Money Market Directory*

lieves will provide superior performance.

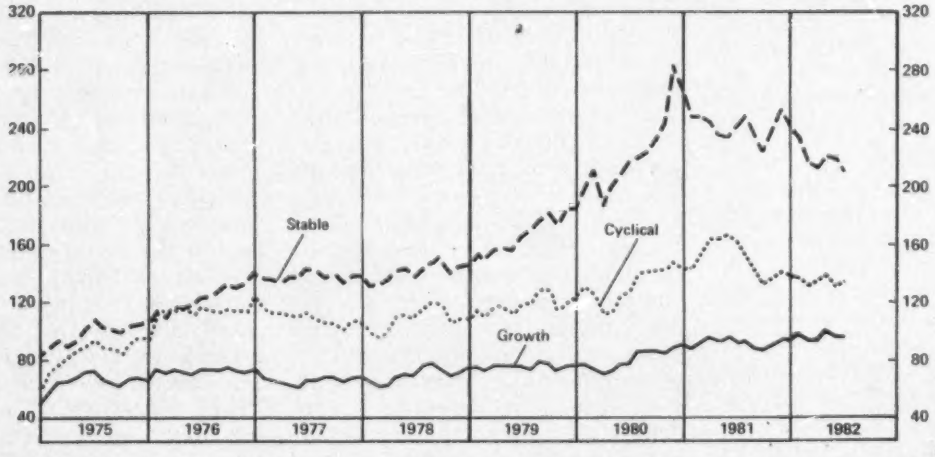
In considering sector weightings, it is useful to segment the U.S. stock market into economic sectors, such as growth, cyclical, stable, and energy. These sectors are generated by the statistical procedure of clustering analysis, and the resultant sectors are called "homogenous stock groupings." Exhibit VII graphically shows the performance during the past nine years of one such segmentation. As can be seen from the exhibit, significantly superior or inferior returns could have been earned by over- or underweighting some of the sectors.

To direct annual cash flows effectively, then, the sponsor must monitor the composition of the total portfolio.

Review

Review is the process of verifying that everything is "on track" and making changes as required. Both the investment policy and the management team are reviewed for continued appropriateness. While review is a continuing process, formal reviews are typically held on a quarterly basis.

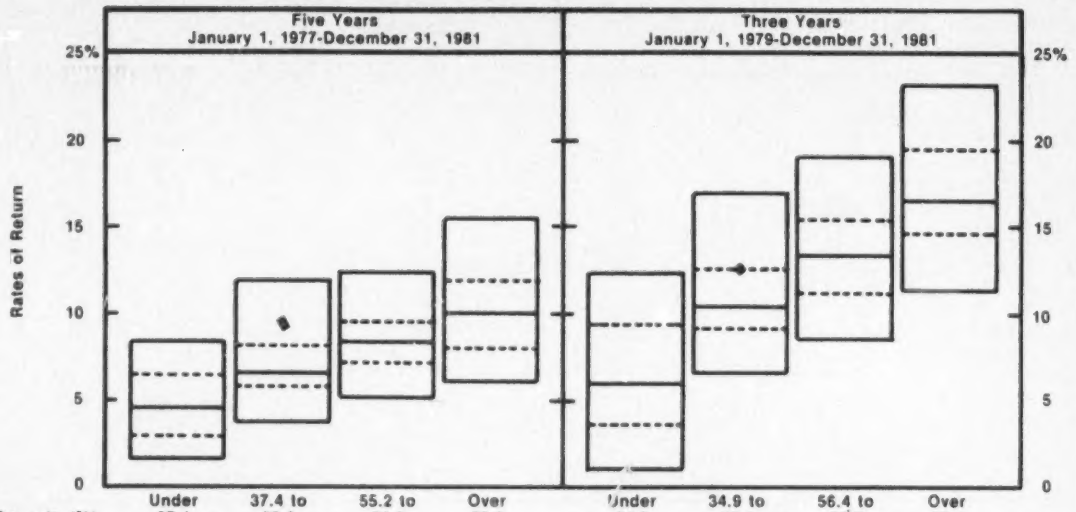
Exhibit VII A. G. Becker Homogeneous Stock Group Indexes*



Annual Returns (%)									Cumulative Annualized Returns 1/73–6/82 (9.5 years)
Stable	28.6	34.1	−0.8	5.2	26.8	42.8	−7.7	−13.3	8.1
Cyclical	50.9	29.3	−13.8	0.9	13.8	18.3	−0.6	−4.3	3.0
Growth	32.5	8.6	−8.6	12.1	1.9	19.0	−1.2	3.3	−0.4
S&P 500	37.3	24.0	−7.2	6.4	18.7	32.4	−5.3	−7.9	3.9
T-Bills	5.8	5.1	5.1	7.2	10.7	12.2	15.0	6.4	8.6

*Indexes comprise S&P 500 stocks with correlated risk-adjusted return behavior. Typically, 90% of the S&P stocks are classified.

Exhibit VIII **Total Fund Annualized Rates of Return Compared to Funds With Similar Equity Commitment**



Range of Commit. (%)	Under 37.4	37.4 to 55.2	55.2 to 75.6	Over 75.6	Under 34.9	34.9 to 56.4	56.4 to 75.7	Over 75.7
5th Percentile	8.4	11.9	12.5	15.4	12.4	16.9	19.1	23.2
Median	4.6	6.6	8.4	10.1	6.0	10.5	13.4	16.6
95th Percentile	1.6	3.7	5.2	6.1	1.0	6.6	8.6	11.5
Return		9.5				12.7		
Percent Rank		14				25		
Avg. Commit.		44.8				44.8		
Percent Rank		71				66		

As indicated in the right panel of Exhibit I, reviews focus on 1) fund results relative to objectives and policy, 2) relative performance, and 3) manager contributions.

In reviewing *fund results* the sponsor determines the extent to which objectives are being realized and monitors adherence to investment policy. Objectives typically include return, contribution, and funded status targets.

In the review process, the sponsor determines why objectives are being met or missed and takes appropriate action as required. For example, if a very high rate of return is earned, the sponsor questions whether this was due to management skill or market conditions. In addition, he may also question whether the investment policy continues to be appropriate in light of this newly earned wealth.

The sponsor also monitors the risk of the portfolio to ensure that policy guidelines are being followed. This risk monitoring focuses on equity commitment, diversification, and total volatility (*i.e*, lack of stability in investment returns). The investment manager should explain any deviations from the investment policy, and these deviations should be corrected. The sponsor should *not* alter his policy in response to a manager's market outlook.

To review *relative performance*, the manager's rate of return is compared to the returns of other managers operating under similar investment policies. Exhibit VIII illustrates how this comparison may be accomplished. The exhibit arrays the ranges of total fund performance earned by funds with varying levels of equity commitment. As can be seen from the exhibit, investment policy had a significant impact on performance for the periods shown (five years and three years ending December 31, 1981), with high returns being associated with high equity commitment. The manager's performance (as represented by the diamond in the exhibit) is located within the appropriate policy bar, and his performance is judged accordingly.

This judgment is the first step in determining the *manager contribution*. To complete his review, the sponsor determines the reasons for performance. These reasons include asset commitment, selection, and redeployment. For example, consider the manager being reviewed in Exhibit VIII. A high equity commitment relative to other funds in his policy range could be a partial explanation of the manager's good performance (14th percentile ranking for five years, or higher than 86 percent of the data base, and 25th percentile for three years), but the manager actually had a relatively low equity commitment—71st percentile for five years and 66th for three years. Further investigation (data not displayed here) revealed that most of the manager's contribution was due to superior selectivity—his selectivity measure exceeded 70 percent of the funds monitored by A. G. Becker, whereas his redeployment measure was exceeded by 70 percent of the funds. If this type of contribution persists over time, the sponsor should encourage this manager to emphasize security selection and to de-emphasize market timing attempts.

Thus, review enables the sponsor to monitor progress toward the achievement of objectives, enforce guidelines, evaluate manager performance, assess manager skills, and make changes where required. □

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Pension World

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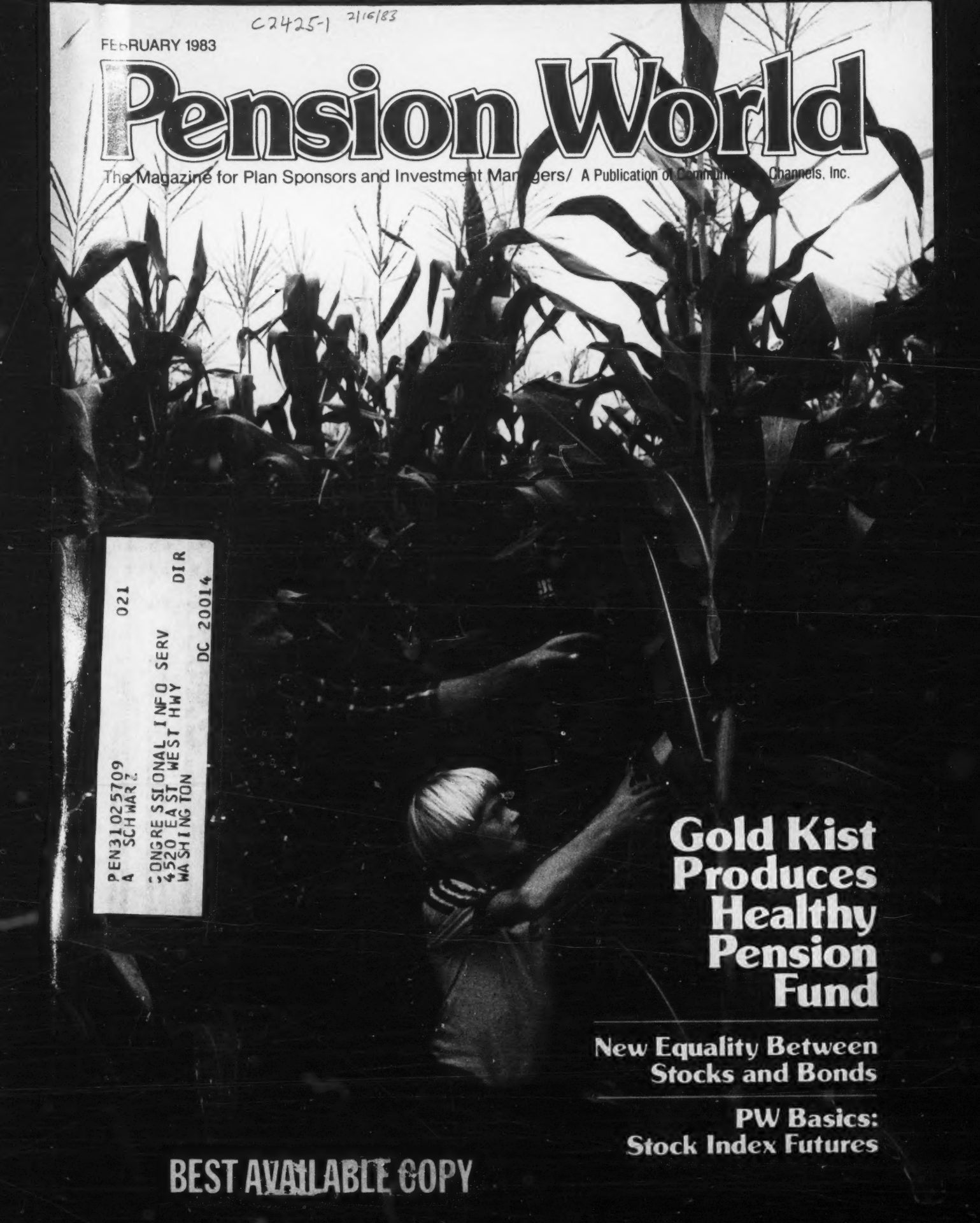

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Gold Kist Produces Healthy Pension Fund

New Equality Between Stocks and Bonds

PW Basics: Stock Index Futures

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Pension World

February 1983
Volume 19 Number 2

The Magazine for Plan Sponsors and Investment Managers/A Publication of Communication Channels, Inc.

Features

Plan Sponsor Focus: Gold Kist produces healthy pension fund by Marie Powers **13**
This farmer's cooperative has set about to provide a benefits package that rivals those at larger firms, and its $35-million pension fund is growing vigorously.

Investment Vehicles: The science of venture capital investing by Joan S. Irish **17**
An authority in this high risk/high return arena looks at some of the techniques used to capture pension dollars and manage the investments successfully.

Investment Manager Profile: Value Line practices disciplined approach by Ronald Derven **20**
Mark K. Tavel, who heads New York City-based Value Line Asset Management, discusses the ranking system and investment decision-making process that have made the firm a respected name in the field.

Benefits Communications: Magazine format scores with Columbia Gas employees by J. David Sullivan **23**
An innovative concept in benefits handbooks, emphasizing employees in their surroundings, is being utilized by Columbia Gas.

Investment Management: Measuring a pension fund administrator's performance by James A. Kujaca **25**
With greater recognition of the fact that many pension fund administrators are in reality portfolio managers, more sophisticated pension fund performance measurements are becoming necessary, as detailed by the manager of finance at Illinois Bell.

Investment Vehicles: The new "equality" between stocks and bonds by Victor J. Melone **27**
The chief investment officer at Manufacturers Hanover takes a close look at the changed relationship between stocks and bonds in today's market.

Pension World Basics: Stock index futures—a new idea in risk reduction by Kandice H. Kahl **37**
This recent addition to the spectrum of investment media provides the pension fund manager with a vehicle to protect his equity portfolio, as explained by a group manager in research at the Chicago Board of Trade.

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Cover: **Gold Kist takes its strength from the crops produced on its members' farms. How the company's benefits plan is nurtured begins on page 13.**

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International Pension World

A review of employee benefits in the Far East

Last month's column discussed the impact of unemployment and recession on employee benefits in Europe. The article also mentioned the effect of the economic slowdown on state benefits. In Europe, governments are attempting to alleviate the horrific unemployment situation—the worst since the Great Depression of the 1930's—by uplifting early retirement benefits for individuals who are made redundant. This puts an even greater strain on the financial conditions of the state schemes and does not seem really to create jobs for the younger unemployed.

Opposition political parties and unions are now suggesting that governments "relate" their economies to produce jobs. Recently, one of the leaders of the British Trades Union Council stated, "This country (United Kingdom) could live with an inflation rate of 14 to 15 percent, which would be far better than pursuing a 5 percent or zero percent inflation rate with the absurd economic costs that brings."

With this as a backdrop, this article now looks at seven countries in the Far East to see what effect, if any, unemployment and the recession is having on occupational and state benefits.

Australia

Once again, the Labor Party (the opposition party) is proposing a national earnings-related contributory pension scheme to supplement the existing social security system.

Social security pensions and unemployment benefits for married couples also have been increased.

The Australian government has proposed to exempt from income tax any benefits received under approved share purchase schemes.

Hong Kong

State old age, disability, and public assistance allowances were increased by 30 percent in 1982. In Hong Kong, manual workers were covered under the Employment Ordinance, which provides termination indemnities. Coverage was extended to cover non-manual workers up to an earnings ceiling, which now brings almost 98 percent of the work force in Hong Kong coverage under the Employment Ordinance.

Japan

Recent surveys continue to indicate that most retirement plans in Japan still provide lump sum benefits. Another trend is the marked increase toward higher age limits for retirement. Following are the figures provided by the Central Labor Board, covering over 400 large employers with 1,000 or more employees.

	Percent of All Plans	
Age Limit	June 1981	June 1979
55 or less	22.3	36.7
56	10.0	12.6
57	21.0	16.7
58	13.8	11.9
59	1.3	0.5
60 or more	31.8	21.7

The same survey also indicates that the majority of companies with an age limit below age 60 have a retiring policy when the employee reaches retirement age.

Korea

Coverage for workers' compensation was greatly increased to cover all employees in factories and mines where there are at least 10 employees.

For employers with 100 or more employees, the government announced that welfare funds must be established. Companies will contribute up to 5 percent of their pre-tax profits to the welfare fund, which is meant to provide subsidized housing loans, scholarships for children of employees, etc.

New Zealand

In New Zealand, increases in social security old age pensions are tied into average weekly wages. Due to inflation, wages have gone up about 17 percent and in 1982 the old age pensions were increased in line with wage increases. In New Zealand, employee contributions for pensions, life insurance, and health insurance are tax deductible. The government increased the maximum tax deductibility for company-sponsored schemes by 50 percent, and for those individuals not covered by company-sponsored schemes by 40 percent.

Singapore

In Singapore, employees and employers contribute to a Central Provident Fund (CPF). In 1982, the combined employee and employer contribution rates of 45 percent were increased, although the contribution earnings ceiling remained unchanged. Benefits from the Central Provident Fund are paid out as a lump sum at age 60. In 1982, the government indicated that it is studying a proposal to pay the benefits as an annuity.

The government also inaugurated a pilot program by 12 leading employers to contract out of the CPF to provide benefits other than the retirement benefits now paid by the CPF.

Taiwan

In 1982, the government increased by some 16 percent the salary ceiling under social security.

A number of proposals were also put forward in 1982 to establish a mandatory pension scheme. The initial proposals are for a provident fund (defined contribution plan) with matching employee and employer contributions. □

by **VINCENT J. SIMONE**
Director, Godwins Limited
Executive Vice President
Hall-Godwins (Overseas) Consulting Co.
Editor, International Benefits
Information Service (IBIS)
Farnborough, England

against the investment financing policy of the fund. It is measured against both the long-term policy and the fund's current or short-term cash position, portfolio balance, view of the economy in general or this industry in particular, and the ability to process or syndicate the deal. It is also measured against the firm's knowledge of the industry, the product, and the firm's ability and desire to be an active investor.

Finally, based on the preliminary information and calculations indicating that the numbers are in the right ball park, a determination is made as to whether there is at least some initial agreement that

a. the entrepreneur is willing to sell part of his ownership

b. there is a good indication of mutual trust and integrity

c. the company's business strategy and planning makes sense

d. the management is acceptable and can be worked with over a long term.

2. *Agreement on principal terms.* Prior to doing more data gathering and analysis, the fund's management seeks to get an understanding on essential terms of the proposed financing. Experience has indicated that this type of understanding is a must before a major commitment of time is made to further investigation and analysis.

Often, one of the principal terms specifies that if the company fails to achieve performance projections and/or suffers a substantial decrease in revenue and/or suffers substantial losses for a stated period, the investor may, at its option, enter into a process to elect a new chief executive officer and/or restructure the board of directors.

3. *Information requested from applicant.* If the proposal survives the initial screening and agreement on principal terms, the fund requires precise information concerning identification of the applicant, financing sought, history of the business, etc. This investment proposal must incorporate a business plan. The plan must indicate what purpose the funds are to be used for and give enough information to provide an initial rough indication of possible return on investment.

It should describe management,

Pension investment in venture capital

Venture capitalists have been aggressively courting pension funds ever since the Labor Department ruled the area appropriate for ERISA accounts three years ago. There is strong evidence that their efforts are paying off.

In the past, pension officers have stayed away from venture capital investment for two main reasons:

1. *The investment was considered too risky.* Fund managers look for 10-year track records, and even veteran venture capitalists were hard-pressed to produce such records in the face of the dried-up market of the 1970's.

2. *The investment required a disproportionate amount of time for the money involved.* Venture capital firms have traditionally been "small." Thus, while $10 million to $15 million would represent only a small percentage of a multimillion-dollar pension fund, it could easily be half the size of a typical venture capital fund.

The scene has changed dramatically, however. Several venture capitalists now have impressive 10-year track records. Compounded rates of return of 20 to 40 percent and higher are typical. These track records, the reduced capital gains tax rates, and an entrepreneurial business climate have combined to attract increasing amounts of capital to the venture community, creating mega-venture funds. This trend is exemplified by the recent $150 million raised by Kleiner, Perkins, Caufield & Byers with the backing of prestigious Morgan Stanley & Co.

Pension officers are responding to this changing scene, with the larger funds, with assets of more than $500 million, taking the lead.

Some medium-sized funds are also making small venture capital investments, but only a very small percentage of small pension funds (those under $100 million) are going into venture capital.

Although the pension funds have been placing a relatively small amount of their alternative investment capital in venture vehicles, the total pension fund commitment constitutes the dominant source of current venture capital investment (see chart below).

Commitments to Venture Capital Independent Private Firms Only (millions)

				Percent of Total Capital Committed		
	1980	1981	1982 (6 mos.)	1980	1981	1982
Pension Funds	$197	$200	$228	30%	23%	32%
Individuals and Families	102	201	115	16	23	16
Insurance Companies	88	132	112	13	15	16
Foreign	55	90	107	8	10	15
Corporations	127	142	90	19	17	13
Endowments and Foundations	92	102	54	14	12	8
Total	$661	$867	$706	100%	100%	100%

Source: *Venture Capital Journal*, July 1982

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MARCH 1983

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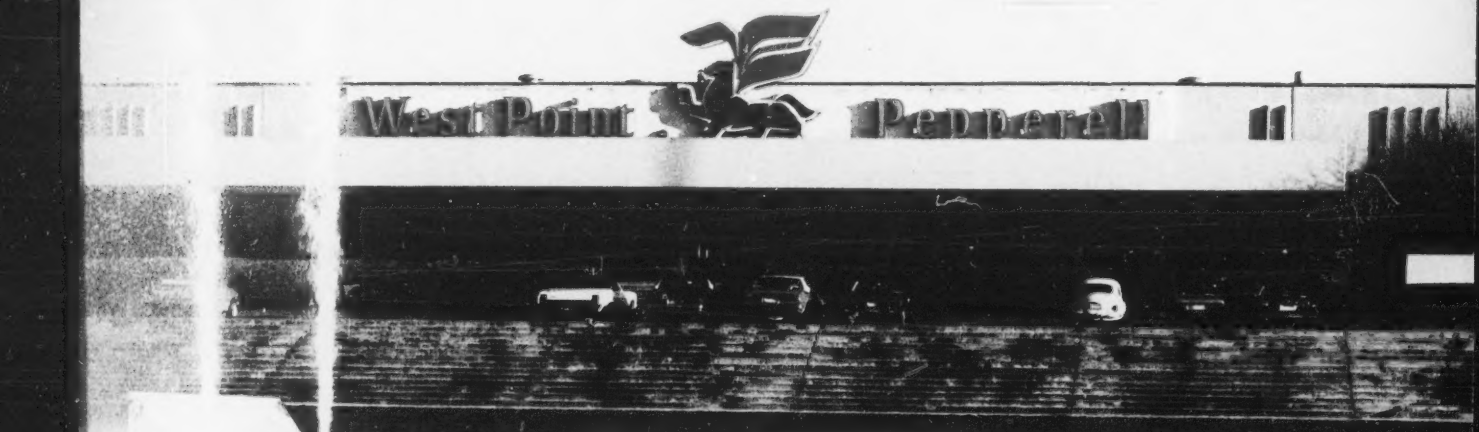

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WestPoint Pepperell Weaves Quality Plan

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Using Computers in Benefits

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Pension World

March 1983
Volume 19 Number 3

The Magazine for Plan Sponsors and Investment Managers/A Publication of Communication Channels, Inc.

Features

Plan Sponsor Focus: WestPoint Pepperell weaves quality plan by Diana H. P. Roberts **14**
With over 21,000 employees located across the country, this textile manufacturer is not complacent in keeping its pension plans geared to workers' needs, as outlined by three of the firm's pension and benefits executives.

Plan Administration: Updatable micrographics for retirement plan records by Stephen M. Morris **19**
Though designing the right recordkeeping system continues to challenge plan administrators and consultants, updatable systems are finding acceptance through their increased productivity and cost savings.

Investment Manager Profile: Atalanta limits growth for maximum performance by Ronald Derven **24**
With over $200 million in assets, this New York City-based manager strictly limits further growth to retain its flexibility and performance levels—which consistently exceed the S&P 500 and Salomon Brothers Corporate Bond Index.

Plan Design and Administration: Ninety days to a 401(k)—it can be done by Ronald J. Rakowski **28**
The benefits staff of Great Northern Nekoosa Corporation determined last September that a cash or deferred arrangement would benefit its employees. Here, the manager of compensation and benefits recounts how the company implemented the option by January 1.

Tangible Investments: Pension fund investment: the law and rare coins by Neil S. Berman **32**
Though significant legislative barriers to placing rare coins and other collectibles into some retirement plans now exist, corporate and union plans still have access to this specialized investment vehicle.

Using a Computer: Measuring risk for LTD self-insurance by Bernard E. Hartt **34**
According to a manager at Peat, Marwick, Mitchell & Co., an employer today can determine when it becomes economical to reassume all or a portion of the financial uncertainty associated with its long-term disability program.

Pension World Basics: Making computers work for the benefits department by Phillips B. Baily **38**
A consultant to Towers, Perrin, Forster & Crosby sorts out the many hardware and software alternatives available to human resource managers and suggests how to build the right system for a particular department's needs.

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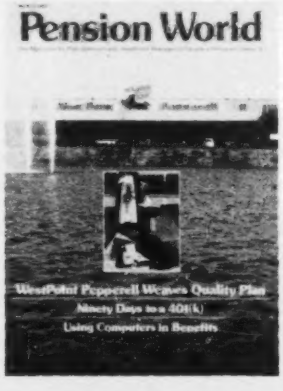

Cover: **The fountains in front of WestPoint Pepperell's Carter and Lanier Mills form a distinctive backdrop for a display of the company's towels and sheets. How the firm designs its pension plans begins on page 14.**

Cover photo by Jim Gaither, WestPoint Pepperell.
Cover inset photo by Diana H. P. Roberts.

BPA

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Latin America: the effect of social, economic, and political trends on benefit planning

Part I

As is the situation in most countries in the world today, the social environment, unemployment, extremely high inflation, and other economic and political conditions play a very important role for the multinational employee benefit planner in Latin America. Latin American laws not only protect workers but also provide extremely generous termination indemnities, which must be taken into consideration by benefit planners. Many countries are at the brink of bankruptcy (see *Pension World*, November 1982) and will have to cut back on some of their economic expansion plans. Yet, in spite of the economic situation, which has created generally high unemployment, there is still a demand for management and technical employees in many countries in Latin America.

To provide up-to-date information on compensation and benefits in Latin America, this two-part article reports on the International Benefits Information Service seminar on Latin America, which attracted some 150 participants, with 40 speakers from 10 Latin American countries.

Beryl Frank of the Organization of American States not only covered the economic, political, and social climate in Latin America but also delved into the development of social security in this region. Chart I, which was prepared by Frank, outlines the risks covered by social security in Latin America. Although this list appears impressive, Frank points out in Chart II that a large percentage of the population in many Latin American countries is *not* actually covered by social security.

Frank also indicated that Latin America must find 86 million *new* jobs by the end of this century. With inflation and unemployment one of the highest in the world, the search for new jobs will be a monumental task.

Latin Americans believe that the passage of a law should solve a problem, Frank pointed out. However, he believes that this would create a system whereby, in many instances, the law may not realistically answer the question created by the problems.

Compounding the situation is the fact that most economies in Latin America are based on raw materials—coffee, sugar, tin, oil, etc. This means, of course, that the Latin Americans have little real control over their economic future.

Jan Hottinga of Westinghouse Electric Corp. compared employee benefits in Latin America with those in Europe and the United States. Hottinga pointed out that there is a shortage of management and technical personnel in Latin America and indicated that salaries for these categories of employees are relatively high. To attract and retain management and technical employ-

Chart I **Risks Covered by Social Security in Latin America**

Country	Risks: Old-Age, Disability, Death	Sickness, Maternity	Professional Risks	Unemployment	Family Burdens
Argentina	X	X	X	—	X
Bolivia	X	X	X	—	X
Brazil	X	X	X	X	X
Chile	X	X	X	X	X
Colombia	X	X	X	—	X
Costa Rica	X	X	X	—	X
Cuba	X	X	X	—	—
Dominican Republic	X	X	X	—	—
Ecuador	X	X	X	—	—
El Salvador	X	X	X	—	—
Guatemala	X	X	X	—	—
Haiti	X	X	X	—	—
Honduras	X	X	X	—	—
Mexico	X	X	X	—	—
Nicaragua	X	X	X	—	—
Panama	X	X	X	—	—
Paraguay	X	X	X	—	—
Peru	X	X	X	—	—
Uruguay	X	X	X	X	X
Venezuela	X	X	X	—	—

Source: Beryl Frank, Organization of American States

by **VINCENT J. SIMONE**
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ees it is necessary to design benefit programs that are usually extremely generous when added to the high salaries. Employee benefits normally provided include medical plans as well as death in service and accidental death and disability plans.

Hottinga listed the following factors that affect employee benefits in Latin America:

- generous social security or the lack of social security programs;
- mandatory termination, profit sharing, and other generous programs;
- lack of pension legislation;
- extremely high inflation;
- political instability;
- culture;
- standard of living (*e.g.*, subsidized company canteens may provide the only real meal for the workers).

Oscar Brain, who was born, educated, and worked for Dow Chemical International in Latin America, went into considerable detail about Latin American culture. As he indicated, it is important to the North American benefit planner to understand the needs of the local nationals. For example, he mentioned that most Latin Americans think only in terms of the present and believe their children will take care of them when they grow old.

Brain indicated that the three most important factors to consider in developing a total compensation program in Latin America are 1) company objectives, 2) needs of employees, and 3) government policies and philosophies. He added that Latin American requirements are usually short term, mainly due to high inflation, economic uncertainties, culture, and the fact that the working population is relatively young compared to that of North America. Brain also indicated that pension plans are neither wise nor popular in Latin America but added that cafeteria-type benefit plans could prove effective in this region. □

Part II of this article will appear in the April issue of Pension World.

Chart II **Percentage of the Population Covered by Some of the Social Insurance Systems in Latin America**

Country	% of the Economically Active Population	% of the Total Population
Bolivia (Caja Nacional de Seguridad Social)	20.6	21.7
Colombia (Instituto de Seguros Sociales)	25.5	10.1
Costa Rica	66.0	86.0
El Salvador	12.3	5.7
Guatemala	35.6	14.5
Mexico (Mexican Social Insurance Inst.)	32.8	55.4
Nicaragua	16.9	8.5
Panama	51.1	53.5
Venezuela	29.1	37.7

Source: Reports and Annual Statistical Reviews of Social Insurance Institutions, 1980.

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Gerber's Pension Plan Is No Baby

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Convertible Bonds Investment

Deregulation of Prohibited Transactions

Are Changes Coming in Pension Accounting?

Pension World

April 1983
Volume 19 Number 4

The Magazine for Plan Sponsors and Investment Managers/A Publication of Communication Channels, Inc.

Features

Plan Sponsor Focus: Gerber's pension plan is no baby—nor is its funding by Ronald Derven **13**
With the vested liability of its benefits plan fully funded, Gerber Products Co. needs not take exceptional risks in investing its plan assets. The plan sponsor *does* expect a real rate of return of at least 2 percent.

FASB Pension Proposal: Are changes coming in pension accounting? by Norman N. Strauss and Richard Schwartz **23**
The Financial Accounting Standards Board (FASB) has proposed a variety of changes relating directly to sponsors' financial statements that could indirectly affect the market values of sponsors' securities held as investments by pension trusts.

Investment: Convertible bonds: investment for medium-size fund by John P. Calamos **28**
In spite of the attractive combination of above average performance at low risk, convertible bonds remain one of the most overlooked areas of investment opportunity.

Social Security Changes: The impact of required participation on nonprofits by Frank J. Raiti and Rosemary C. Goudy **31**
If Congress enacts the recommendation that all employees of nonprofit organizations be required to participate in the Social Security system beginning in 1984, the costs may be high to the nonprofit organization and to its employees—both in money and in employee morale. There are steps that can cushion the impact.

Legislation: The deregulation of prohibited transactions by Michael M. Carlson **34**
A prohibited transaction class exemption proposed by the Department of Labor will grant exemption to a pension fund managed by a Qualified Professional Asset Manager in much the same way PTE 78-19 and PTE 80-51 grant exemptions to insurance company pooled separate accounts and collective investment funds maintained by a bank. The proposed exemption also keys into some of the particular problems of managers involved in real estate investment.

Plan Design and Administration: A flexible approach to executive perquisites by J. E. Richard and Kenneth P. Shapiro **38**
The "frosting on the cake" for many executives includes a variety of "perks" ranging from low interest loans and financial counseling to club memberships and executive dining rooms.

Pension World Basics: Pre-retirement information needed from employer by Duane F. Hanf **52**
How can employers be most helpful in assisting their employees who are planning for retirement? Pre-retirement information on benefits, including computerized projections, can be timely, accurate, and relevant to the employee's retirement objective.

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Cover: **While Gerber Products Co. traditionally caters to an infant population, it does not overlook its own employees' retirement needs. The story begins on page 13.**

Cover photo by Mark Nisbett, Gerber AV photographer.

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Convertible bonds: investment for medium-size fund

One of the most overlooked areas of investment opportunity is convertible bonds. This is paradoxical since the investment characteristics of these securities dovetail neatly with one of the investment goals of most plan sponsors: above average performance at low risk.

The convertible bond market is relatively small by comparison to the common stock market and the straight corporate bond market. However, since 1980, nearly $20 billion of convertible securities have been issued (see Table I).

Corporations usually issue convertible bonds when conditions make it difficult to issue common stock (*i.e.*, low stock prices) and/or the long-term money markets are demanding unacceptably high interest rates for straight debt. The increased volatility of the straight corporate bond market, caused by the ever changing interest rates, has resulted in unacceptable long-term returns. Even the dramatic increase in bond prices in 1982 has not significantly altered the poor long-term performance of straight corporate bonds. Because of these conditions in the past few years, the issuance of convertible bonds occurred at a near record pace.

Table I Public Offerings of Convertible Securities (includes convertible bonds and convertible preferred stock)

Year	Total Debt Public Offerings (in millions)	Number of New Convertible Issues	Convertible Securities (in millions)	Convertibles to Total Debt (%)
1976	22,835	20	1179	5.2
1977	18,906	19	848	4.5
1978	16,340	24	680	4.2
1979	19,895	32	1165	5.9
1980	32,301	106	5415	16.8
1981	34,061	84	5097	15.0

Source: Drexel Burnham Lambert

Table II Investment Characteristics E. F. Hutton 9½'s of 2005

Convertible bond price	$1,220
Coupon rate	9.5%
Years-to-maturity in 2005	22
Standard & Poor's investment grade	A–
Investment value at 14.0% yield-to-maturity	$ 700
Conversion ratio (shares of common stock)	29.1
Common stock price	$ 40
Conversion value (29.1 shares x 40)	$1,164

Hybrid security

As its name implies, a convertible bond is a hybrid security having characteristics similar to those of straight (nonconvertible) bonds and common stock. As a fixed-income instrument, a convertible bond provides guaranteed income (coupon) and a maturity date when the company must redeem it at full par value ($1,000). A convertible bond is issued by a corporation at a lower interest rate than a straight bond. In return for the lower interest rate, the corporation gives the holder of the bond the right to convert that bond into a predetermined number of shares of common stock.

In today's market, the typical new convertible bond carries a 9 percent coupon, matures in 20 to 25 years, and has a 20 percent conversion premium. That is, its underlying common stock must rise only 20 percent in the future for the bond to be worth its full $1,000 par value upon conversion into common stock. A stock price advance greater than 20 percent would result in the bond being worth more than $1,000.

The typical new convertible bond has investment characteristics similar to a combination of 50 percent straight bonds and 50 percent common stock, which is similar to the popular balanced approach employed by most tax-exempt funds. Therefore, the risk profile of a convertible bond can be readily compared to that of the low-risk balanced approach.

Not all convertibles, however, offer a significant advantage over a combination of straight bonds and common stock. For example, a newly issued convertible bond usually comes to the market at a fair value. At the initial offering, large institutional investors can purchase the large quantities that their multimillion dollar portfolios may require. At that point, the convertible does not represent an "undervalued" opportunity.

But in the after market, these same convertible bonds may be avoided by institutions who opt for more actively traded markets in straight bonds and common stocks. This creates an inefficiently priced sector of the financial market, resulting in an investment opportunity for those investors that do not re-

by **JOHN P. CALAMOS**
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quire multi-million dollar purchases of a single issue. Evaluation procedures can be used to cull out undervalued opportunities in convertible bonds that are suitable for pension plans.

Risk-reward analysis

Over 500 convertible bonds (and convertible preferred stocks) are traded on the New York Stock Exchange. Others trade on the American Stock Exchange, on regional exchanges, and in the over-the-counter market. Convertible investment managers monitor the entire group to search out those offering exceptional risk-reward characteristics. Convertibles that provide significant advantages as compared to a combination of common stock and straight bonds are, by definition, undervalued.

For an example, let's look at an undervalued convertible bond opportunity that was available on E. F. Hutton, Inc., a major securities brokerage firm. Table II shows the important characteristics needed to prepare a risk-reward analysis of the Hutton 9½'s of 2005.

The first step for determining if a convertible bond offers attractive risk-reward characteristics is the preparation of an estimated convertible price curve covering a range of stock prices. Figure I presents the curve for the Hutton 9½'s of 2005 for stock prices up to $60 a share. Note that if the common stock were to decline, the convertible bond would approach its investment value of $700 (the expected market price if the bond were not a convertible). For a stock price advance, the convertible would approach its conversion value (29.1 shares times the stock price). For example, at a stock price of $60, the bond must sell for at least $1,746 (29.1 × 60 = $1,746).

Figure II compares the convertible bond with investments in Hutton common stock, straight bonds, and the 50/50 balanced approach. As shown, the convertible bond provides about the same cash flow and risk posture as the balanced approach. However, its main advantage is its greater appreciation potential (51 percent versus 33 percent for a 50 percent stock price advance). Thus, investment in the Hutton convertible bond was superior to investment in Hutton's common stock and straight bonds, pro-

Figure I E. F. Hutton 9½'s of 2005 Convertible Bonds

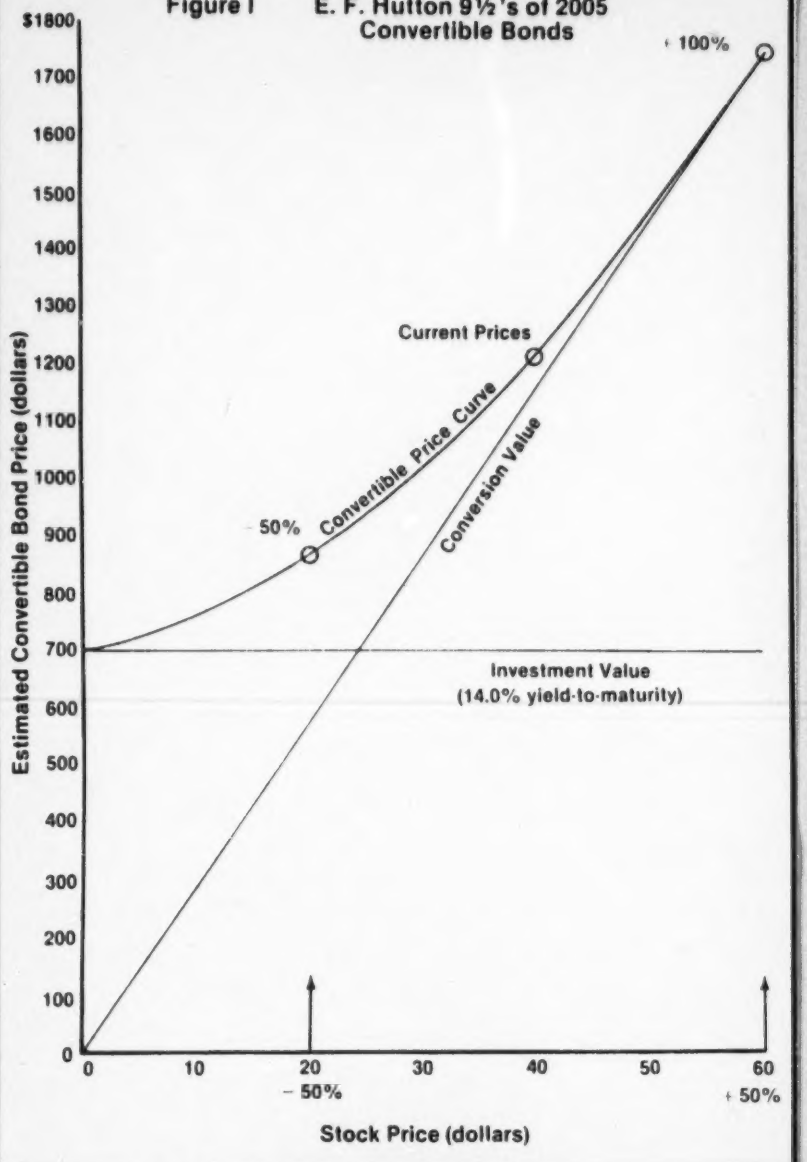

Figure II Risk-Reward Analysis for E. F. Hutton Securities

	Stock Price Change in 12 Months		
	– 50%	0%	+ 50%
Common stock price	20	40	60
Convertible bond price (Figure I)	870	1,200	1,750
Common stock			
Capital gain or loss	– 50.0%	0%	+ 50.0%
Dividends	+ 2.0	+ 2.0	+ 2.0
Total return	– 48.0%	+ 2.0%	+ 52.0%
Straight bonds*	+ 14.0%	+ 14.0%	+ 14.0%
Balanced approach (50% stock/50% bonds)	– 17.0%	+ 8.0%	+ 33.0%
Convertible bond			
Capital gain or loss	– 28.7%	0%	+ 43.4%
Interest	+ 7.8	+ 7.8	+ 7.8
Total return	– 20.9%	+ 7.8%	+ 51.2%

*The 14.0 percent return assumes constant long-term interest rates over the next 12 months.

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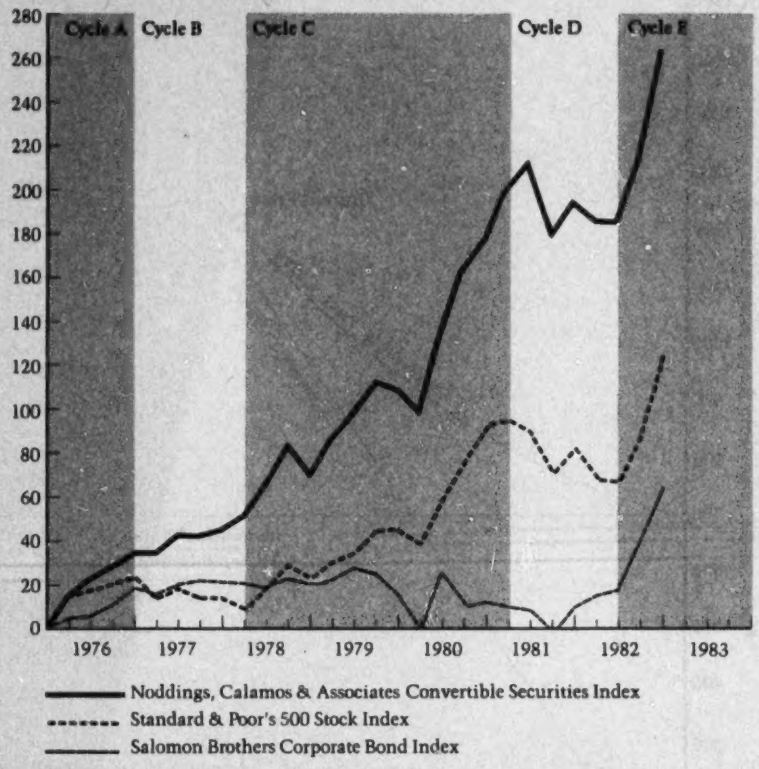
Figure III
Seven-year Performance Results
Cycle Analysis of Convertible Securities Index Versus Market Indexes



Source: *The Investor's Guide to Convertible Bonds* by Thomas C. Noddings (Homewood, Ill.: Dow Jones-Irwin, 1982). Used by permission.

viding greater opportunity without incurring much greater risk.

An investment strategy

From the more than 500 convertibles listed on the New York Stock Exchange, an entire portfolio can be built of undervalued convertible bonds and preferreds. The medium-size tax-exempt fund can use undervalued convertible securities as an alternative to the balanced approach and significantly improve the long-term performance at no increase in risk.

Careful monitoring of the convertible portfolio is necessary to maintain the preselected risk-reward posture. This means replacing those convertibles that lose their risk-reward advantage with new candidates that have superior characteristics, thereby protecting gains in rising markets and assuring limited risk in declining markets.

Performance

Conventional investments employed by plan sponsors have convenient indexes, which can be used as yardsticks. Unfortunately, convertible securities, being the hybrid issue that they are, do not readily lend themselves to a convenient index. However, an index has been developed that is representative of the past performance of undervalued convertible securities. The index represents undervalued convertibles selected by investment analysis, similar to the Hutton 9½'s of 2005 discussed above. This analysis determines criteria for the purchase and the sell points of individual issues and considers the many variables that influence the price behavior of the convertible bond.

The Noddings-Calamos Convertible Securities Index is shown in Figure III. It illustrates the advantage that undervalued convertible securities enjoy over both the stock and bond markets. The annualized total return for the seven-year period, December, 1975, through December, 1982, for undervalued convertibles was 20.2 percent, compared to 12.0 percent for the stock market and 6.9 percent for straight corporate bonds. The undervalued convertibles provided a lower risk alternative to common stock investing.

Possible pitfalls

Before plan sponsors commit funds to a convertible security investment strategy several pitfalls should be noted. Convertible bonds can be called in for redemption by the issuing company. In most cases, this forces the bondholder to convert to common stock and close out the position sooner than expected. Because of this possibility, close attention to call features and conversion premium above the call price must be observed.

Adhering to pre-established guidelines in both buying and selling convertible bonds is essential for success with convertibles. The lack of a disciplined approach will cause the investment performance of convertibles to be no better than a randomly selected group of stocks and bonds.

The execution of convertible trades should be done by knowledgeable brokers experienced in convertibles and in touch with that market on a continual basis. Although convertible bonds are listed on the major exchanges, most of the trading is done through market makers in the vast broker/dealer network.

The pitfalls are manageable and should not hinder the use of convertible bonds in tax-exempt funds. Like most superior investment opportunities, attention to investment analysis and adherence to the fund's specific investment guidelines can resolve the anticipated pitfalls.

Unlike the large pension funds, which may have a few convertibles interspersed throughout their portfolio, the medium-size fund can take full advantage of these opportunities and significantly improve overall plan performance. Many smaller businesses have become successful by seeking and exploiting market niches largely ignored by big business. Similarly the medium-size tax-exempt fund can improve its investment performance, not by emulating the strategies used by the large plans, but by seeking and implementing investment strategies in which "smallness" is an advantage for the fund. □

A flexible approach to executive perquisites

Almost every organization provides some special noncash compensation benefit to a key executive or group of executives. This could be access to corporate aircraft, a mortgage loan arrangement, a country club membership, or any number of other special items. These benefits, commonly known as perquisites or "perks," can range from 10 to 20 percent of base salary. But dollar value alone is not why more and more companies recently have been focusing attention on these executive "extras." Prudent management knows that perquisites can be:

- a tax efficient way to reward certain employees;
- a compensation device that does not send costs skyrocketing because it need not be extended to all employees;
- an important complement to the total compensation package, aiding in the competition for top talent;
- a good way to "individualize" compensation arrangements; and
- a means to improve executive productivity (by providing personal computers, for instance).

In addition, perquisites can help equalize a benefits system which, ironically, discriminates in some ways against higher income employees. Because most benefits costs are fixed, companies spend *proportionately less* on standard benefits for executives than they do on lower paid employees. For instance, data from the *1982 Hay-Huggins Noncash Compensation Comparison* show benefits values average 57.9 percent of salary for the $10,000 employee, but only 33.8 percent for the $100,000 executive.

Unfortunately, many perquisite programs have evolved in a haphazard fashion. Often, management merely copies programs offered by the competition. But those who treat perquisites as little more than an afterthought are missing a tremendous opportunity to respond to the specific needs of their executive corps.

Figure I Changes in Prevalence of Executive Perquisites

Perquisite/Benefit	Percentage of Companies 1982	1980	1978	% Change 1978-82
Loans/Mortgages	4%	6%	13%	– 69.2%
Apartments/Suites	10%	13%	20%	– 50.0%
Spouse Traveling on Company Business	27%	34%	47%	– 42.6%
Personal Legal Services	5%	5%	7%	– 28.6%**
Excess Personal Liability Insurance	11%	11%	15%	– 26.7%
Special Parking	64%	69%	79%	– 19.0%
Company Aircraft	30%	38%	37%	– 18.9%
Country Club Memberships	46%	46%	49%	– 6.1%
Executive Physical Examinations	82%	80%	84%	– 2.4%
Luncheon Club Memberships	53%	52%	54%	– 1.9%
Key Man Life Insurance	11%	10%	11%	0 %
Executive Dining Room	20%	20%	20%	0 %
Executive Vacations	37%	37%	36%	2.8%
Employer-Provided Cars	69%	67%	65%	6.2%
Deferred Compensation Plans	23%	20%	20%	15.0%
Sabbaticals	5%	5%	4%	25.0%**
Nonqualified Supplemental Retirement	25%	23%	20%	25.0%
Split Dollar Insurance	9%	8%	7%	28.6%**
Executive Medical Expense Reimbursement	17%	16%	13%	30.8%
Executive Group Life Insurance	20%	18%	13%	53.8%
Personal Financial Counseling	28%	21%	18%	55.6%
Executive Severence Pay Plans	18%	19%	*	
Waiver of Eligibility Waiting Periods	15%	15%	*	
Executive-Only Pre-Retirement Counseling	4%	4%	*	
Employment Contracts	11%	*	*	

*Not surveyed.
**Low prevalence makes % change insignificant.

Source: *1982 Hay-Huggins Noncash Compensation Comparison.* Survey sample = 805 large U.S. companies.

One of the most important potential advantages of executive benefit/perquisite programs is their flexibility—both for the individual and for the company. For instance, a company can allow an executive to select those items that are of the most interest to him or her. This modified "cafeteria" approach also gives the corporation the opportunity to get a much greater return on its investment than through standard approaches. Satisfaction with, and appreciation of, benefit programs seem to be proportionate to their usefulness. Executives are no exception. Such programs can also help attract mid-career executives, sometimes by alleviating some pressure regarding unusual salary demands or other personal needs. They are also useful in companies where executives' ages may vary widely. (See Figures I and II for some current trends on the use of perquisites.)

Although perquisite programs should be structured to meet individual needs, any perquisite system must maintain internal equity (as with other compensation programs). Awarding "perquisite units" to executives based on a com-

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bination of salary grade midpoint and organizational level is one way to combat potential inequities. An executive then uses these unit credits to select benefits and perquisites from the approved array. Figure III shows how this system works.

The first step is to determine the value of the units to be awarded. The next is to decide upon the array of special benefits and perquisites to be offered, as well as their unit values (as demonstrated in Figure IV).

It would also be possible to attach performance-based criteria to the program so that unit values could vary with corporate, group, and individual performance—as practiced in existing incentive programs.

Designing a flexible approach

In designing a flexible approach to benefits/perquisites—or when converting to other such systematic approaches—a company should consider the following influencing factors:

- corporate culture and related compensation philosophy;
- the characteristics, demographics, and personal needs of the executive group;
- the public disclosure (SEC) requirements of each benefit/perquisite offered, as well as current and potential tax effects;
- the present value and after-tax considerations in measuring the cost/unit efficiency of each item in the program;
- the integration of the executive program into the existing basic benefits plans and reasonableness of incremental costs;
- the particular business evironment of the company's geographical area and competitive practices/trends;
- the maturity level of the business and strategic plans; and
- effects upon the rest of the organization and plans for extending the program in the future.

This area of compensation lends itself to creative and imaginative approaches. But the plan must be carefully designed, with particular consideration of long-term effects.

However, it is not prudent to use an executive benefit/perquisite program as a substitute for other parts of the compensation package. These programs should not be used to offset a bad bonus year or depressed salary levels. Doing so usually creates future difficulties that would defeat the entire purpose of total compensation planning.

If a company offers executives discriminatory benefits/perquisites that fall in several tax status categories, multiple programs are needed to achieve maximum tax efficiency.

For example, one part of the program would include all taxable (present and deferred) items, such as supplementary retirement, insurance, health clubs, autos for personal use, and so one. Because those types of items are also more oriented to the long-term, they are not conducive to a yearly change.

The segment of the program dealing with the non-taxable portion

Figure II

Benefit/ Perquisite	Taxes on Executive	Company Cost	Comments
SUPPLEMENTAL RETIREMENT	Deferred until after retirement.	Carried on books as unfunded liability.	Generally nonqualified and therefore not subject to all ERISA requirements.
SUPPLEMENTAL LIFE INSURANCE	Nominal tax required.	Immediate.	Many new products have been developed by major insurance companies to meet executive pre- and post-retirement cash needs (*i.e.*, Split Dollar).
SUPPLEMENTAL MEDICAL/DENTAL INSURANCE	Not taxable if benefits are provided through an insurance contract.	Usually $3,000-$6,000 per executive per annum.	Covers all expenses not included in regular plans. Extremely efficient compensation vehicle and well received by executives and their families.
COMPANY AUTO FOR PERSONAL USE	No tax except for proportion of personal use (reported).	Varies by type of auto (usually $10,000-$15,000 per executive/ year if all expenses covered).	Does not work well in all circumstances (if used little for business).
LOW/NO INTEREST LOANS	No tax under most circumstances.	Cost of capital times amount outstanding.	The IRS continues to challenge the exemption of this benefit but has been overturned by the Tax Court each time. However, a recent higher level court decision could change this.
CLUB MEMBERSHIPS (BUSINESS, LUNCH, ATHLETIC, AND COUNTRY CLUBS)	No tax unless used for personal reasons (and reported).	Perhaps $500-$10,000 initiation plus $50-$100 monthly.	Questionable value for business use, especially country and athletic clubs. (Luncheon clubs are more tax efficient).
FINANCIAL AND TAX COUNSELING	Taxable but offset by normal deductions derived from using counsel in this area.	$500-$10,000 per year (per executive).	Continues to be a useful benefit for executives and is perhaps the fastest growing perk.
PHYSICAL EXAMINATIONS	No tax.	$100-$1,000 biannually per executive is typical.	Level and type of coverage can vary according to executive's choice and location.
OFFICER/ DIRECTOR LIABILITY INSURANCE	Generally not taxable income.	Varies with coverage and rates.	Used to protect the personal finances of executives in the event of a legal suit against the management of the company—more prevalent in certain industries.

Figure III **Executive Benefit/Perquisite Value Determination**

Executive	Salary Grade Midpoint	% of Salary Awarded/Value[1]	Converted To Units[2]
CEO/President	$250,000	20%/$45,000	45
Executive Vice President	200,000	18%/$36,000	36
Senior Vice President	160,000	15%/$24,000	24
Vice President Finance & Admin.	135,000	12%/$16,000	16
Vice President Operations	135,000	12%/$16,000	16
Vice President Marketing	135,000	12%/$16,000	16
Vice President Division	120,000	10%/$12,000	12

Program cost: $165,000 (14.5% of participant payroll).
One unit for each $1,000.

could include such items as supplementary disability, medical/dental reimbursement, low/no interest loans, and the like.

Because these programs do not fall under the requirements of Code Section 125, which regulates the administration of cafeteria plans, there would be immediate or future tax on either group.

Extending the program

Although it may be quite beneficial to extend flexible perquisites to other management levels or key groups, this is somewhat more difficult to administer. High technology companies have done so with research & development engineers; many other companies with their management information system (MIS), sales, and technical professionals; and hospitals with their physicians. In these cases the "menu" of items should usually be modified to the particular needs of these groups. The percentage of salary midpoint here typically will be lower than that used at the top management level. Total incremental costs for these additional groups might range from 10 to 12 percent of covered payroll.

At these levels, flexibility generally has more impact—primarily because such progressive practices are necessary for more effective recruitment and retention of relatively scarce talent that traditionally may have a higher turnover rate than upper level management. To accomplish total compensation program objectives, this program should be strategically integrated with other compensation elements, such as proper cash compensation positioning and targeted potential for performance-based long-term incentives.

Using the flexible approach

Some companies already are using this flexible approach to perquisites. The following examples illustrate the varieties of uses that flexible perquisites have.

- An international energy services company installed a flexible type program five years ago to gain more tax efficiency for its key executives. Initially, it covered only the top 12 officer-level group; after two years, it was extended to cover an additional 50 middle-management executives.
- A mature high technology company adopted this type of technique during a depressed business period. The purpose was to allow individuals to elect non-taxable benefits in lieu of future salary increases and for bonus payments. (Net effect: increase in after-tax income.)
- A large midwestern health care institution installed a unique plan for physicians only in order to offer more unusual compensation arrangements and to be more effective in recruiting higher caliber house staff.
- A Wall Street investment banking firm decided to cover all senior professionals in the firm. The program was set up to appeal to key executives whose ages varied widely.
- A small, privately held publisher adopted the program for its four family owners and then ex-

(Continued on page 54)

Figure IV **Approved 1983 Benefits/Perquisites and Unit Values**

Executive Participant	Units Available	Low Interest Loan (5-20)*	Medical/ Dental Reimbursement (1-8)*	Computer & Special Telecommunication Equipment	Auto (5-15)*	Clubs (1-12)*	Tax Counsel (1-3)*	Total Units Used
CEO/President	45	15	6	7	12	2	3	45
Executive Vice President	36	9	8	5	10	2	2	36
Senior Vice President	24	15	0	0	8	0	1	24
Vice President Finance & Admin.	16	5	2	4	5	0	0	16
Vice President Operations	16	4	3	0	7	1	1	16
Vice President Marketing	16	3	1	0	10	1	6	16
Vice President Division	12	2	5	0	5	0	0	12

*Unit value
The program would obviously be more effective with more items (and particularly ones that are responsive to the needs of the organization's specific executive group).

ment. Finally, the taxation of benefits should be briefly covered.

Example

As an example, let's look at a company that has a defined benefit pension plan and a thrift/savings plan. Let's assume a real growth rate of 2½ percent for monies invested in the thrift plan and also for conversion to a constant purchasing power annuity after retirement.

Figure 1 shows what the projections for one employee might look like from the thrift/savings plan. Assuming that the employee continues his current savings pattern (5 percent of payroll with a 50 percent company match in this example) until the indicated retirement ages, this illustration shows what the savings plan account balance would approximate in terms of today's dollars. It also shows the effect of changing future contribution patterns by 1 percent.

Monthly annuity equivalents of the savings plan projections are combined with Social Security and pension projections in Figure 2. The projections show estimated dollar amounts on a before-tax basis. These dollar amounts are then translated into replacement ratios on both a before-tax and an after-tax (spendable income) basis. The spendable income replacement ratios are highlighted because these are the key numbers for retirement planning purposes.

Figure 3 is a written explanation that might be given with the projections shown in Figures 1 and 2 in order to assist the employee in understanding the projections and in setting reasonable retirement goals. □

International Pension World

(Continued from page 6)

Rey, Puerto Rico, indicated that for an employer in Puerto Rico to obtain a tax deduction for benefit plans, the employer must contribute at least 50 percent of the total cost of the benefit plan. Lowell Chase, Pfizer Latin America, Coral Gables, Fla., explained that the typical plan in Puerto Rico provides a pension of 1.4 percent of "career average" earnings or 1.75 percent of career average earnings including social security.

Venezuela

John S. Groene, Johnson & Higgins, Caracas, Venezuela, and Jose E. Urquiza Jorge, C.A. La Seguridad, a Caracas-based insurance carrier, spoke of the large debt that Venezuela has incurred—another case where a country has overspent mainly because they believed that oil revenues would provide the funds to fuel their social programs. The discussion covered the mandatory termination indemnities—cessentia (termination pay) of 15 days pay per year of service and the antiguedad (seniority pensions).

Caribbean Countries

George Carrick, The Travelers Insurance Co., Hartford, Conn., and Charles V. Schaller-Kelly, Alcan Trading (Bermuda) Ltd., Hamilton, Bermuda, noted in this session that pension plans are not usually found in the Caribbean. However, death benefits are usually provided with medical plans written with deductibles.

Central America

Luis Chocano Caballero, Tecnicos en Seguros S.A., and Manuel Lemus, Cruz Azul S.A., both of Guatemala City, pointed out that pension plans are few and far between in this area. Medical and death benefits are the most popular benefits, and most multinational companies do provide employees these benefits. □

A flexible approach to executive perquisites

(Continued from page 40)

tended the plan to account executives.

Some caveats

Before creating and installing any perquisite program, top management must consider some of the implications that this program might have. For instance, some packages might generate negative publicity, with charges that corporate executives are living lavishly at the expense of stockholders or other employees. Specifically, those designing perquisite programs should anticipate the response of four key groups:

IRS. The Internal Revenue Service has continued its careful scrutiny and aggressive efforts to close loopholes. The Securities and Exchange Commission has mandated tougher disclosure rules resulting in much greater visibility. (Regulatory Commissions also carefully review these matters in approving rate hikes.)

The IRS has a strong interest in ensuring that these forms of compensation are not used to evade taxes. Under Internal Revenue Code Section 162, the company generally can deduct executive benefits and perquisites as "other compensation for services rendered." The Code definition of income includes property and services, as well as cash for personal services rendered. It is clear that both Congress and the IRS have been more tolerant about the use of these forms of compensation than what they may be in the future.

Boards. More active Compensation Committees of boards have become increasingly aware, responsible, and concerned with this part of the compensation program. And, both the business and general public press have intensified their efforts to expose compensation data and information, which has resulted in negative public, shareholder, and company employees' reaction.

Unions. The unions also are not hesitant to bring these matters to the bargaining table for the purpose of additional leverage in their negotiations with management. This has been especially true in the last two years because union employees have been forced to accept settlements that offer a much more conservative rate of improvement, if any.

Other Employee Groups. Companies have also experienced problems with other employee groups, including management, because of resentment due to selective treatment at the top level; therefore, a number of organizations have adopted conservative policies. This has been especially true in nonunion environments where egalitarian philosophy is effective in maintaining closer identification between employees and the company.

A well-planned program of perquisites, like any other compensation device, will contribute to the recruitment, development, and retention of a company's best employees. Flexible approaches to perquisites allow companies to meet specific needs of key executives or special employee groups. Although perquisites may be opposed or challenged by some groups, the potential benefits of a strategically conceived program usually outweigh its potential shortcomings. □

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MAY 1983

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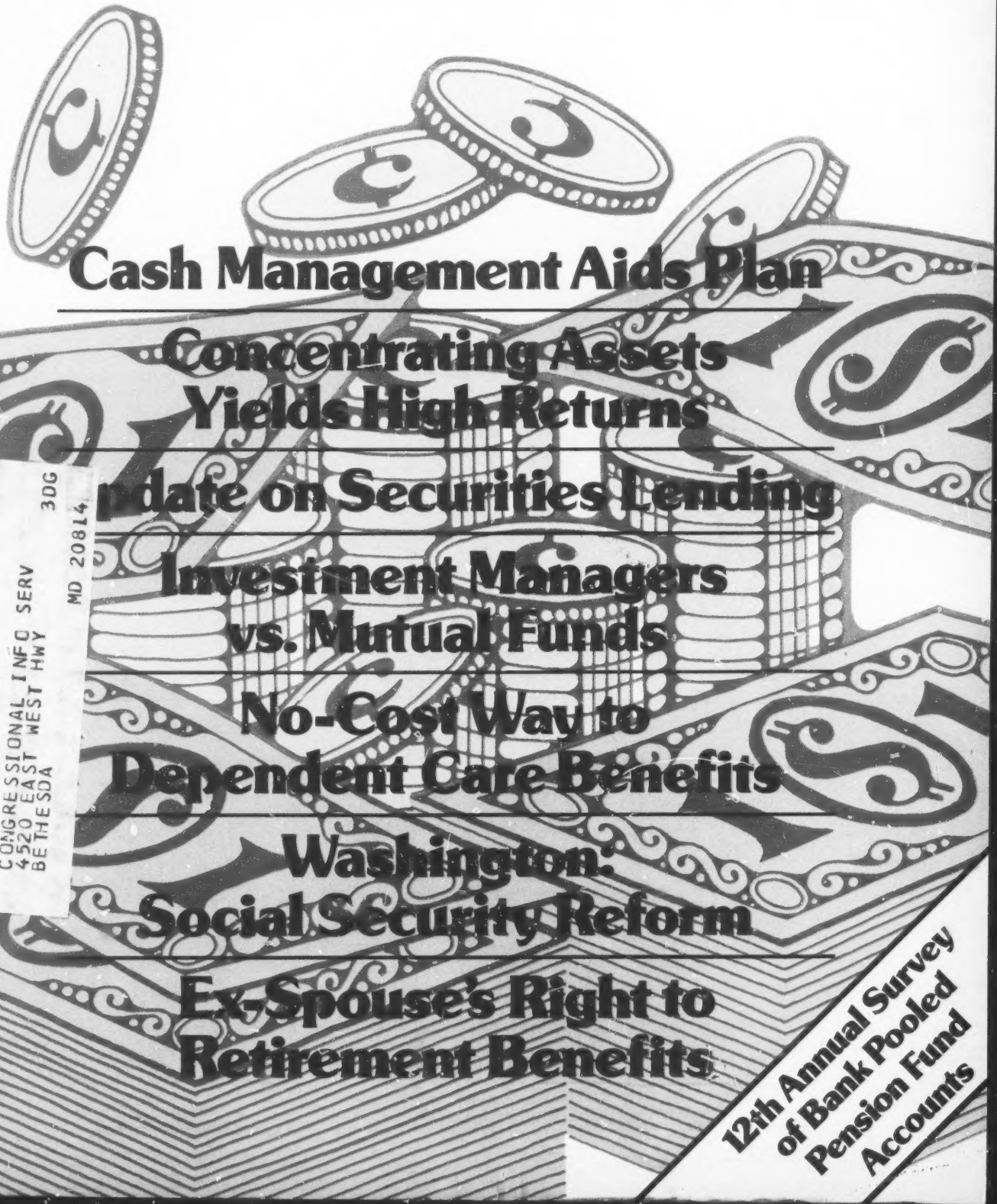

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Pension World

May 1983
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Investment Manager Profile: City Trust concentrates assets for high return by Ronald Derven **19**
City Trust Services, headquartered in Elizabeth, N.J., uses a rather unusual investment approach for its management of pension fund assets. With this strategy, City Trust has consistently been a first-quartile performer.

Investment Management: Investment managers, mutual funds outpace S&P 500 by Robert A. Levy **22**
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12th Annual Survey of Bank Pooled Pension Fund Accounts **43**
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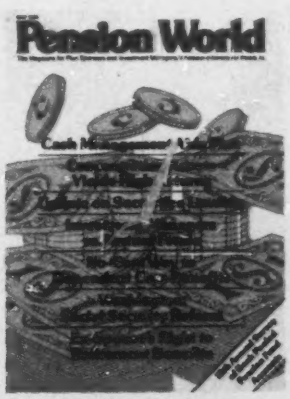

Cover: **A look at some of the titles of the stories in this issue reveals a focus on managing investments and, in general, maximizing the plan sponsor's dollar.**

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International Pension World

Unemployment—a crisis for international benefit planners

Unemployment figures in Europe are not encouraging as they continue to rise. The Organization for Economic Cooperation and Development (OECD) recently predicted that there will be nearly 35 million unemployed workers in the industrialized world in 1984, as compared to 30.25 million unemployed in 1982, approximately 25 million unemployed in 1981, and 10 million unemployed during the 1974-75 recession.

For Western Europe, the OECD paints a rather dismal picture. Annual growth is predicted to be up only 1½ percent in mid-1984 over the mid-1982 figure. The unemployment figures, however, are predicted to rise by nearly 2 million a year to 19.5 million by 1984. In fact, there is a real possibility that Belgium, The Netherlands, and the United Kingdom will face 20 percent unemployment during this decade. (Unemployment figures for various countries are shown in Figure I.)

Figure I Unemployment Indices
(Number of unemployed workers in thousands)

	Dec. '82	Nov. '82	Oct. '82	Dec. '81
United Kingdom	3,097.0 13.3%	3,063.0 13.2%	3,049.0 13.1%	2,764.1 11.7%
United States	12,036.0 10.8%	11,906.0 10.7%	11,576.0 10.5%	9,389.0 8.6%
	Nov. '82	**Oct. '82**	**Sept. '82**	**Nov. '81**
West Germany	2,038.2 7.7%	1,920.0 7.3%	1,820.0 6.9%	1,490.0 5.7%
France	2,161.0 9.5%	2,176.7 9.6%	2,099.2 8.9%	2,016.0 8.9%
Italy	2,533.4 11.2%	2,469.8 10.9%	2,426.7 10.7%	2,137.0 9.6%
Netherlands	611.6 11.4%	591.9 11.1%	579.4 10.8%	443.0 8.5%
Belgium	606.3 14.9%	601.3 14.8%	600.1 14.8%	518.0 12.8%
	Oct. '82	**Sept. '82**	**Aug. '82**	**Oct. '81**
Japan	1,390.0 2.4%	1,340.0 2.3%	1,300.0 2.2%	1,220.0 2.1%

Many member states of the European Economic Community (EEC) are tackling their unemployment problems by permitting workers to retire early and by reducing work hours. Unfortunately, eliminating jobs through early retirement and shorter hours does not automatically create jobs. In fact, it can exacerbate cost problems. For example, in Germany, social security contributions, according to actuarial figures, will need to double in the next 50 years to meet existing old age state pension commitments.

With respect to early retirement, the pattern of change has varied greatly in Europe from country to country.

In Belgium, which has the highest unemployment rate in the EEC at 14.9 percent (as of November, 1982), both shorter work hours and early retirement have been implemented as "stop gap" measures. In both Belgium and The Netherlands, state benefits have been cut to make ends meet.

In France, the joint employer-employee government unemployment fund has recently collapsed, partly due to the misguided, generous early retirement policy.

In the United Kingdom, pensions and other benefits presently consume 17 percent of Britain's public expenditure. The normal retirement age has been age 60 for females and age 65 for males. In spite of the high expense, the idea had been suggested that the normal retirement age for males be cut to 60 years of age. This radical idea has been shelved by a recommendation of the Common Social Services Committee to have one retirement age for men and women—63 years of age.

In Sweden, an earlier precedent permitted part-time workers between ages 60 to 64 to receive 65 percent of their previous earnings. This has now been reduced to 50 percent.

And due to the generous early retirement provisions in Germany, only 35 percent of Germany's males over age 60 are still in the work force.

Even the election of conservative governments (The Netherlands, Belgium, Germany, and the United Kingdom) has done very little to stem the tide towards early retirement, which costs the state and employers considerable sums of money.

The following chart indicates the percentage of the male population, ages 60 to 64, in the work force of various countries during 1970 and 1979.

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by **VINCENT J. SIMONE**
Director, Godwins Limited
Executive Vice President
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Editor, International Benefits
Information Service (IBIS)
Farnborough, England

International Pension World

(Continued from page 6)

Men Ages 60-64 in the Work Force

	1970	1979
Belgium	63.8%	33.0%
Germany	74.7	39.5
France	65.2	38.2
Britain	86.6	75.8
Netherlands	73.9	59.9
Austria	47.7	26.1
Sweden	79.5	69.0
U.S.A.	75.0	61.8

In general, benefit planners in Europe are finding it more and more difficult to create adequate benefit programs as current trends present more and more difficulties for them. Traditionally, these planners have designed pension plans on the premise that most employees will retire at traditional ages that are in line with those of the state. And most of the plans are designed to provide benefits for full-time employees.

Unemployment and lack of economic growth are causing many planners to rethink their present pension programs and to institute flexible pension plans in line with economic problems facing Europe today. □

City Trust Profile

(Continued from page 21)

are automatically forcing him to deal in larger and larger cap issues," says Manley. "When the fund is small, he can go to very small cap stocks, but as the fund grows to $500 million, five advisors with five stocks, you are talking about $20 million in one stock. So by having five instead of three advisors, we expand to some extent the amount of assets we can accomodate. Having said that, we intend to cap this at a certain size—perhaps $150 million."

After this fund is capped, Manley has every intention of launching a new Select Fund using different advisors.

Goal is top performance

City Trust's goal is to be a consistent first-quartile performer. "Consistent performance," emphasizes Manley, "means that regardless of what market environment we are in, the results will be good."

How does this concept work in a down market? "We have only operated in up markets, but on a back-tested basis, in the two years in which the market was down, the five largest holdings produced positive performance among each of the advisor's running portfolios in 1977 and four of the five in 1981. We think that we can, regardless of the market environment, achieve very favorable results. We have been a consistent first-quartile performer."

Table II shows the back-tested results of the firm's current advisors.

Besides the Select Fund, City Trust also offers an insured fund. "This, in a sense, is our answer to insurance companies' GIC's. It is a commingled fund invested entirely in CD's, either of commercial banks or S&L's. The important feature of this fund is that the insurance aspect flows through to individual participants in the fund. If it is a profit-sharing plan, for example, each of the individuals in that plan, whose money is invested, is insured up to $100,000 per CD. If we had one individual in there with $300,000, we would have three CD's to make sure we were fully insuring his interest." □

Fiduciary Should Know

(Continued from page 41)

any such order, it is important from the perspective of the plan's qualified status that an attempted attachment of benefits 1) relate to alimony or family support payments, 2) be pursuant to a valid court order, and 3) be directed at benefits in pay status. Benefits not in pay status may only be subject to attachment when the benefit becomes payable under the terms of the plan, usually at early or normal retirement age in the case of a defined benefit pension plan. In addition, if the spouse has an outstanding judgment against the participant, and such benefits could be in pay status if the participant elected to receive them, the spouse may be able to compel early payment of the benefits and proceed to satisfy her judgment from the proceeds. Any order of attachment that does not satisfy these conditions will be subject to the general non-alienation provisions of ERISA and should be carefully reviewed by counsel to determine if any other exception to the rule applies. Also, it may be advisable to request a private letter ruling from the IRS that would specifically pertain to the plan subject to attachment and may be relied upon with respect to the qualification issue. □

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12th Annual Survey of Bank Pooled Pension Fund Accounts

The 1983 Survey of Bank Pooled Pension Fund Accounts is based on responses from 79 banks holding 138 funds. Although the number of banks reporting in 1983 is fewer than the number that reported in 1982 (95 banks), the number of funds has increased. (There were 125 funds held by the banks reporting in 1982.) Total assets managed in bank pooled pension funds by the reporting banks are $31,565,710,766 (as of December 31, 1982).

The allocation of the assets as reported in the 1983 survey shows 33.23 percent in common stocks, 27.65 percent in cash and cash equivalents, 17.25 percent in corporate bonds, 8.25 percent in government securities, 4.67 percent in mortgage securities, 4 percent in real estate, and 4.95 percent listed in "other."

The funds reporting in the 1982 survey had 49.9 percent of their holdings in cash and equivalents, 21.26 percent in common stocks, 21.19 percent in corporate bonds, 3.4 percent in real estate, 1.62 percent in U.S. government securities, and .9 percent in mortgages.

The holdings of common stock by this year's respondents is noticeably higher than the common stock holdings of last year's respondents. On the other hand, comparing the cash equivalents reported shows just the reverse—down considerably from last year's. The percentage reported in mortgages is higher this year, as is the percentage in real estate, while the holdings in corporate bonds is somewhat lower than last year's holdings.

In answer to the question, "In 1983, do you expect to increase, decrease, or hold even your stock commitments?" 70 percent of those answering said they will increase, 1 percent said decrease, and 29 percent plan to hold even. This was based on 70 total responses to the question.

In the 1983 survey, 1,034 different stocks are listed. The drop-outs outnumber the drop-ins—at 195 and 115 respectively.

As in last year's survey, 16 stocks are newcomers to the list of the favorite fifty. Altnough most of the major oil companies remain in the favorite fifty, only Atlantic Richfield is in the top 10—and it moved from second place in 1982's survey to fourth place in this year's listing. The longest drop from the top 10 was Exxon's move from number seven to number 22. General Motors' leap from number 40 to number 10 is quite a move up, as is MCI's appearance in the favorite fifty for the first time—landing in spot number 12 from out of nowhere. In addition to GM, the other new arrivals in the top 10 are Johnson & Johnson, moving to number seven from spot number 23, and Hewlett Packard, who was number 19 last year and is now number nine.

Performance of bank pooled common stock funds during 1982 was dramatically better than that of the previous year. For the year ending December 31, 1982, Computer Directions Advisors, Inc. (CDA), Silver Spring, Md., reports the S&P Stock Index at 21.6 percent and the bank pooled common stock funds at 22.7 percent. This shows great improvement over the December 31, 1981 levels of −5.0 percent for the S&P and −4.2 percent for the bank pooled common stock funds. *Pension World's* survey respondents reflected this improved performance in answering the question, "Are the total funds in pooled pension fund accounts up or down from the previous year?" Eighty-seven percent responded that their funds were up, 12 percent that they were down, and 1 percent that they were even.

What stocks they hold

Stock	% of Funds Holding	Number of Shares Held
Aaron Rents	.7	600
AB Fortia	1.4	34,300
Abbott Laboratories	10.9	272,600
Academy Insurance Group	.7	10,000
ADAC Laboratories	.7	22,700
Adage	.7	5,000
Adams-Russell Co.	.7	45,000
Advanced Micro Devices	.7	21,400
Advanced System	.7	7,200
AEL Industries	.7	8,000
Aetna Life & Casualty Co.	8.0	135,800
AFG Industries	.7	4,000
Air Products & Chemicals	2.2	69,924
Air Wisconsin	.7	30,000
Airborne Freight Corp.	1.4	40,000
Alaska Airlines	2.9	220,327
Albertson's	2.2	31,500
Alco Standard Corp.	.7	13,853
Allegheny International	1.4	115,300
Allegheny Power Systems	2.2	50,600
Allied Bancshares	.7	10,000
Allied Corp.	2.9	57,700
Allied Stores Corp.	1.4	26,200
Alpha Microsystems	.7	2,000
Altos Computer System	.7	500
Aluminum Co. of America	2.2	73,500
Ambesco Industries	.7	25,000
Amdahl Corp.	2.2	155,200
Amerace Corp.	.7	5,100
Amerada Hess Corp.	2.9	69,018
American Brands	2.2	43,400
American Broadcasting Cos.	2.9	26,700
American Can Co.	.7	13,200
American Cyanamid Co.	2.2	64,400
American District Telegraph Co.	.7	14,000
American Electric Power Co.	.7	25,000
American Express Co.	13.8	248,120
American Family Corp.	.7	12,000
American General Corp.	2.9	93,505
American Greetings Corp.	2.2	36,000
American Home Products Corp.	16.7	548,100
American Hospital Supply Corp.	9.4	857,300
American Income Life Insurance Co.	1.4	30,500
American Int'l Group	4.3	375,000
American Medical Int'l	4.3	169,900
American Monitor Corp.	.7	5,906
American National Insurance Co.	.7	27,500
American Science & Engineering	.7	7,560
American Standard	.7	2,000
American Sterilizer Co.	2.2	58,000
American Stores Co.	.7	6,500
American Telephone & Telegraph Co.	31.9	1,293,241
Ameritrust Corp.	1.4	38,200
Ames Department Stores	2.2	25,400
Ametek	2.2	45,200
AMP	5.8	292,277
AMR Corp.	.7	18,000
Analog Devices	.7	15,000
Analogic Corp.	.7	10,000
Anchor Hocking Corp.	.7	7,100
Angelica Corp.	1.4	50,000
Anheuser-Busch Cos.	8.7	137,000
Anixter Brothers	1.4	160,600
Apogee Enterprises	.7	5,000
Apple Computers	1.4	109,350
Applied Data Research	2.2	38,850
Applied Magnetics	.7	19,000
Applied Materials	.7	29,000
ARA Services	1.4	32,600
Archer Daniels Midland Co.	8.0	372,554
Arizona Public Services Co.	3.6	131,500
Arkla	7.2	337,100
Armco	.7	20,800
Armstrong World Industries	1.4	40,000
ASARCO	.7	600
Associated Dry Goods Corp.	2.2	42,300
Atlantic Bancorp.	.7	2,000
Atlantic Richfield	26.8	1,858,942
Augat	2.2	31,100
Autoclave Engineers	.7	20,000
Automatic Data Processing	5.1	99,800
Avantek	2.2	86,600
Avco Corp.	3.6	194,700
Avery Int'l Corp.	.7	2,000
Avnet	1.4	241,500
Avon Products	5.8	179,700
AVX Corp.	.7	20,000
Aydin Corp.	2.2	25,066
Baker Int'l Corp.	2.9	124,200
Baldor Electric Co.	2.2	76,800
Baldwin-United Corp.	2.2	61,800
Bally Mfg. Co.	3.6	120,000
Baltimore Gas & Electric Co.	.7	10,000
Banctec	.7	10,000
Bandag	1.4	20,000
Bank South Corp.	.7	11,500
Bankamerica Corp.	4.3	98,850
Bankers Trust Columbia, S.C.	.7	20,000
Bankers Trust New York Corp.	5.1	347,900
Barclay's Overseas Floating Rate	.7	250,000
Bard (C. R.)	1.4	30,750
Barden Corp.	.7	2,000
Barnes Group	.7	24,300
Barnett Banks of Florida	1.4	16,000
Bassett Furniture Industries	.7	4,600
Bausch & Lomb	2.2	64,900
Baxter Travenol Laboratories	5.1	86,100
Baybanks	.7	16,000
BBDO Int'l	.7	13,000
BDM Int'l	.7	9,600
Beatrice Foods Co.	5.1	100,685
Becton, Dickinson & Co.	1.4	46,000
Belco Petroleum Corp.	.7	48,980
Bell & Howell Co.	1.4	41,000
Belo (A. H.) Corp.	1.4	26,000
Bergen Brunswig Corp.	1.4	57,000
Best Products	.7	25,000
Bethlehem Steel Corp.	.7	1,000
Betz Laboratories	4.3	62,500
Beverly Enterprises	.7	40,000
Big Three Industries	3.6	53,300
Black & Decker Mfg. Co.	.7	6,000
Block (H. & R.)	3.6	25,800
Blue Bell	.7	10,000
Boeing Co.	5.8	262,860
Boise Cascade Corp.	.7	10,000
Bolar Pharmaceutical	.7	22,000
Bolt Technology Corp.	.7	500
Borden	1.4	26,600
Borg-Warner Corp.	2.9	109,000
Boston Digital Corp.	.7	15,000
Bowne & Co.	2.2	49,600
BPI Systems	.7	15,000
Bracken Oil	.7	25,000
Briggs & Stratton Corp.	2.2	74,200
Bristol-Myers Co.	13.0	241,054
Brock Hotel Corp.	1.4	42,000
Brown-Forman Distillers Corp.	3.6	54,400
Brown Group	2.2	25,950
Browning-Ferris Industries	3.6	212,600
Brush Wellman	.7	34,500
Buckbee Mears Co.	1.4	24,000
Bucyrus-Erie Co.	.7	2,500
Burlington Industries	2.2	49,400
Burlington Northern	2.2	198,548
Burroughs Corp.	4.3	38,400
Butler Int'l	.7	141,000
Cado Systems Corp.	.7	24,000
Cameron Iron Works	.7	15,900
Campbell Red Lake Mines	.7	9,000
Campbell Soup Co.	1.4	34,300
Canadian Marconi	.7	20,000
Canadian Pacific Ltd.	1.4	8,600
Capital Cities Communications	2.9	199,500
Capital Holding Corp.	5.8	190,300
Caressa	.7	32,400
Carolina Freight Carriers Corp.	.7	12,000
Carolina Power & Light Co.	1.4	22,600
Carpenter Technology Corp.	.7	10,300
Carter Hawley Hale Stores	.7	2,000
Carter (William) Co.	.7	5,000
Castle Entertainment	.7	37,400
Caterpillar Tractor Co.	9.4	100,345
CBI Industries	.7	5,000
CBS	4.3	78,400
CBT Corp.	.7	15,000
Celanese Corp.	.7	296,300
CELERON Corp.	2.9	188,500
Centel Corp.	2.9	56,000
Centex Corp.	1.4	12,700
Central Illinois Light Co.	.7	2,000
Central Illinois Public Svc. Co.	.7	3,915
Central Louisiana Electric Co.	.7	8,000
Central & Southwest Corp.	4.3	185,100
Cessna Aircraft Co.	.7	600
CFS Continental	2.2	27,700
Champion Int'l Corp.	1.4	4,000
Charles River Breeding Labs	.7	114,800
Charming Shoppes	.7	1,000
Chart House	2.9	35,400
Charter Medical	1.4	42,750
Chase Manhattan Corp.	5.1	514,600
Chemed Corp.	1.4	12,000
Chemical New York Corp.	.7	21,000
Chemlawn Corp.	1.4	119,600
Cherry Electrical Products Corp.	.7	23,000
Chesebrough-Pond's	8.0	111,000
Chicago & Northwestern Transportation Co.	.7	4,500
Chomerics	.7	4,000
Chromalloy American Corp.	.7	44,000
Chrysler Corp.	.7	1,065,600
Chubb Corp.	.7	8,000
Church's Fried Chicken	2.9	70,800
CIGNA Corp.	6.5	547,903
Cincinnati Gas & Electric Co.	.7	32,400
Circle K Corp.	2.2	122,000
CIT Financial Corp.	.7	2,000
Citicorp	8.7	494,500
Citizens & Southern Corp.	.7	2,100
Citizens Utilities Co.	.7	3,500
City Federal Savings	.7	37,600
Claiborne (Liz)	.7	4,500
Clark Equipment Co.	.7	14,300
Clark (J. L.) Mfg. Co.	.7	47,000
Cleveland-Cliffs Iron Co.	1.4	17,000
Cleveland Electric Illuminating	.7	5,000
Clorox Co.	1.4	46,100
Cluett Peabody & Co.	.7	10,700
Coachmen Industries	.7	9,500
Coastal Corp.	2.2	29,000
Coca-Cola Co.	8.7	352,225
Coherent	.7	5,500
Cole National Corp.	.7	27,500

Stock	% of Funds Holding	Number of Shares Held
Coleman Co.	.7	1,300
Colgate-Palmolive	5.1	193,100
Collaborative Research	.7	89,800
Collagen Corp.	.7	128,200
Collins & Aikman Corp.	1.4	16,500
Collins Food Int'l	.7	33,000
Color Tile	1.4	73,000
Colorado National Bankshares	.7	7,000
Columbia Gas System	2.2	38,300
Combined Int'l Corp.	4.3	98,500
Combustion Engineering	2.2	14,000
Commerce Clearing House	.7	400
Commercial Alliance Corp.	.7	50,000
Commodore Int'l Ltd.	1.4	6,050
Commonwealth Edison Co.	2.2	38,000
Communications Corp. of America	.7	16,668
Communications Industries	.7	8,900
Communications Satellite Corp.	2.2	12,650
Community Psychiatric Centers	1.4	54,200
Compo Industries	.7	17,000
Comprehensive Care Corp.	.7	50,000
Compucorp	1.4	244,700
Compugraphic Corp.	.7	111,500
Computer & Communications Technology Corp.	.7	35,000
Computer Products	.7	30,000
Computer Task Group	.7	32,400
Computervision Corp.	3.6	165,600
Computone Systems	.7	28,000
Com-Serve	.7	55,100
Comshare	.7	166,500
ConAgra	.7	14,348
Conair	.7	19,000
Conroy	.7	6,000
Consolidated Edison Co. of N.Y.	2.9	1,187,400
Consolidated Foods Corp.	2.2	37,100
Consolidated Freightways	5.1	125,402
Consul Corp.	1.4	13,500
Continental Corp.	2.2	81,000
Continental Group	2.9	79,700
Continental Telecom	.7	16,400
Control Data Corp.	3.6	722,100
Convergent Technologies	1.4	59,700
Cooper Industries	4.3	71,962
Cooper Laboratories	.7	15,600
Cooper Tire & Rubber Co.	1.4	42,250
Core Laboratories	.7	12,000
Corning Glass Works	1.4	18,900
Corvus Systems	2.2	82,500
CP National Corp.	.7	64,000
CPC Int'l	2.9	31,600
CPT Corp.	.7	136,100
Crane Co.	.7	9,078
Crawford & Co.	.7	1,000
Cray Research	2.9	21,400
Cross (A. T.) Co.	1.4	24,500
Cross & Trecker Corp.	3.6	111,900
Crump (E. H.) Cos.	.7	1,500
Crystal Oil Co.	.7	4,000
CSX Corp.	3.6	56,021
CTS Corp.	.7	23,000
Cullinane Database Systems	2.2	30,845
Cullum Cos.	.7	95,500
Custom Energy	.7	800,000
Dana Corp.	.7	40,000
Dart & Kraft	7.2	79,300
Data Architects	.7	9,000
Data General Corp.	2.2	50,000
Datapoint Corp.	.7	25,000
Dataproducts Corp.	2.2	114,000
Dayton Hudson Corp.	8.0	667,300
DBA Systems	.7	18,600
Dean Foods Co.	.7	8,300
Deere & Co.	2.9	78,863
Dekalb AG Research	.7	2,000
Delta Air Lines	8.0	257,008
Deluxe Check Printers	.7	24,000
Denny's	3.6	54,100
Deposit Guaranty Corp.	.7	16,000
Detroit Edison Co.	.7	100,000
Diagnostic Products Corp.	1.4	30,000
Diamond Shamrock Corp.	2.9	47,400
Diebold	6.5	75,300
Digital Equipment Corp.	18.1	621,212
Digital Switch	.7	91,100
Dillon Cos.	.7	6,190
Disney (Walt) Productions & Assoc. Cos.	8.7	141,138
Dr. Pepper	.7	5,000
Dollar General Corp.	.7	42,000
Dominion Bankshares Corp.	.7	3,255
Donaldson Co.	.7	2,200
Donaldson Lupkin & Jenrette	.7	26,600
Donnelley (R. R.) & Sons Co.	2.9	35,400
Dover Corp.	2.2	80,200
Dow Chemical Co.	9.4	375,660
Dow Jones & Co.	1.4	7,650
Dravo Corp.	.7	18,000
Dresser Industries	4.3	65,000
Drexler Technology Corp.	.7	19,000
Drillers Service	.7	800
Duke Power Co.	3.6	72,900
Dun & Bradstreet Corp.	7.2	351,548
Dupont (E. I.) De Nemours & Co.	8.0	210,757
Durham Corp.	.7	4,200
Duriron Co.	.7	20,000
Durr-Fillauer Medical	1.4	85,650
Dysan Corp.	1.4	117,700
E-Systems	.7	34,332
Eagle-Pitcher Industries	.7	4,300
Eastern Gas & Fuel Assoc.	1.4	63,200
Eastman Kodak Co.	25.4	961,761
Eaton Corp.	2.2	48,650
Echlin	1.4	32,000
Eckerd (Jack) Corp.	2.2	54,700
Economics Laboratory	.7	25,000
Edwards (A. G.) & Sons	.7	8,000
E G & G	2.2	43,000
Electronic Data Systems Corp.	.7	6,000
Electro-Rent Corp.	.7	6,125
Electrospace Systems	2.2	69,300
Emerson Electric Co.	12.3	246,431
Emerson Radio Corp.	.7	4,000
Emery Air Freight Corp.	.7	8,000
Emhart Corp.	1.4	23,500
Emulex Corp.	.7	3,500
ENSERCH Corp.	1.4	21,400
Enterra Corp.	.7	1,000
Entex	1.4	124,000
Equifax	.7	100
Esmark	2.2	435,562
Essex Chemical Corp.	.7	24,200
Esterline Corp.	1.4	23,300
Ethyl Corp.	.7	20,800
Bob Evans Farms	.7	9,735
Ex-Cell-O Corp.	.7	4,500
Exxon Corp.	14.5	189,150
Fairchild Industries	2.2	24,000
Family Dollar Stores	1.4	42,500
Farmers Group	.7	10,000
Federal Co.	.7	20,000
Federal Express Corp.	7.2	204,800
Federal-Mogul Corp.	.7	128,100
Federal Nat'l Mortgage Assn.	1.4	124,300
Federated Department Stores	5.1	553,900
Fidelity Fed. Savings & Loan	1.4	22,200
Fidelity of Oklahoma	.7	4,000
Figgie Int'l	.7	96,100
Firestone Tire & Rubber Co.	1.4	55,000
First Alabama Bancshares	2.2	32,900
First Bank Systems	.7	20,000
First Boston Corp.	2.2	21,750
First Charter Financial Corp.	.7	58,700
First Chicago Corp.	.7	42,500
First Columbia Financial Corp.	.7	7,500
First Interstate Bancorp.	3.6	43,000
First Kentucky Nat'l Corp.	1.4	23,300
First Mississippi Corp.	2.2	108,000
First Nat'l Boston Corp.	.7	150
First Oklahoma Bankshares	.7	185,450
First Security Nat'l Bank & Trust	.7	2,200
First Union Corp.	.7	6,100
Fischer & Porter Co.	.7	6,300
Flagship Banks	1.4	25,500
Fleetwood Enterprises	2.2	27,685
Flexsteel Industries	.7	11,300
Flightsafety Int'l	1.4	32,900
Floating Point Systems	2.2	53,000
Florida National Banks	.7	20,000
Florida Power & Light Co.	9.4	165,200
Flowers Industries	.7	3,450
Fluor Corp.	2.9	41,657
FMC Corp.	1.4	14,000
Foote, Cone & Belding Communications	.7	26,000
Foothill Group	2.2	67,801
Ford Motor Co.	4.3	532,700
Ford Motor Credit Co.	1.4	252,000
Foremost-McKesson	2.2	59,100
Fort Howard Paper Co.	3.6	33,500
Foster Wheeler Corp.	1.4	90,000
Fox-Stanley Photo Products	.7	48,400
Freeport-McMoran	.7	7,000
Fuji Photo Film Ltd.	.7	260,000
Fuller (H. B.) Co.	.7	36,000
GAF Corp.	.7	220,500
Gannett Co.	8.0	744,700
GATX Corp.	.7	27,000
Geico Corp.	.7	108,250
Genentech	.7	42,000
General American Oil Co. of Texas	.7	20,022
General Binding Corp.	.7	15,000
General Cinema Corp.	.7	3,500
General Datacomm Industries	.7	20,000
General Defense Corp.	1.4	133,000
General Dynamics Corp.	3.6	36,300
General Electric Co.	30.4	884,842
General Foods Corp.	6.5	98,200
General Instruments Corp.	2.2	26,000
General Mills	10.1	574,800
General Motors Corp.	18.1	1,274,381
General Physics	.7	9,250
General Research Corp.	2.2	439,900
General Signal Corp.	5.1	147,900
Genex Corp.	1.4	22,700
GenRad	3.6	58,600
Genuine Parts Co.	2.9	38,500
Georgia-Pacific Corp.	4.3	75,716
Geosource	.7	2,500
Gerber Products Co.	.7	67,300
Getty Oil Co.	1.4	25,500
Gibraltar Financial Corp. California	.7	22,200
Gillette Co.	4.3	41,900
Gleason Works	.7	3,200
Global Marine	.7	10,000
Global Natural Resources	.7	10,000
Godfathers Pizza	1.4	40,100
Golden West Financial Corp.	2.9	88,100
Goldman Sachs & Co.	.7	7,000
Goodrich (B. F.) Co.	1.4	564,400
Goodyear Tire & Rubber Co.	7.2	840,300
Gould	1.4	50,200
Goulds Pumps	.7	4,300
Grace (W. R.) & Co.	2.2	512,400
Graco	.7	6,000

Stock	% of Funds Holding	Number of Shares Held
Grainger (W. W.)	4.3	54,500
Granger Assoc.	.7	29,400
Graphic Scanning Corp.	1.4	28,500
Great Lakes Chemical Corp.	.7	4,500
Great Northern Nekoosa Corp.	2.2	64,000
Greyhound Corp.	2.2	332,600
GTE Corp.	9.4	689,139
Gulf & Western Industries	1.4	61,200
Gulf Oil Canada Ltd.	.7	21,100
Gulf Oil Corp.	2.9	54,000
Gulf United Corp.	2.9	210,200
Halliburton Services	13.8	227,550
Handleman Co.	2.2	43,500
Hanna Mining Co.	.7	8,000
Harland (John H.) Co.	.7	10,400
Harper Group	.7	7,200
Harris Corp. (Del.)	2.9	18,100
Hart Schaffner & Marx	.7	60,000
Harte-Hanks Communications	2.9	45,100
Hartford National Corp.	.7	10,000
Hawaiian Electric Co.	.7	2,000
Heileman (G.) Brewing Co.	1.4	60,000
Heinz (H. J.) Co.	1.4	1,800
Heller (Walter E.) Int'l Corp.	1.4	38,880
Helmerich & Payne	2.9	39,400
Henredon Furniture Industries	2.9	82,100
Hercules	2.9	24,500
Hershey Foods Corp.	.7	2,500
Heublein	.7	9,312
Hewlett Packard Co.	21.0	468,750
High Voltage Engineering Corp.	.7	5,000
Hillenbrand Industries	.7	1,000
Hilton Hotels Corp.	5.1	84,400
Hi-Shear Corp.	.7	2,000
Holiday Inns	5.8	215,600
Home Depot	1.4	13,250
HON Industries	.7	3,500
Honeywell	3.6	31,600
Horizon Corp.	.7	70,000
Hormel (George A.) & Co.	.7	2,000
Hospital Corp. of America	9.4	665,755
Household Int'l Corp.	2.2	59,400
Houston Industries	5.8	201,500
Houston Lighting & Power	.7	2,000
Houston Natural Gas Corp.	2.9	47,200
Houston Oil Trust	.7	15,300
Hughes Tool Co.	5.1	87,500
Humana	4.3	161,000
Hutton (E. F.) Group	1.4	60,000
IBM Corp.	47.1	3,464,931
IC Industries	.7	10,300
ICN Pharmaceuticals	.7	110,000
Ideal Basic Industries	.7	1,406
Illinois Power Co.	1.4	14,000
Imperial Corp. of America	.7	17,500
Imperial Oil Ltd.	.7	8,400
IMS Int'l Corp.	.7	25,000
INCO Ltd.	1.4	31,000
Indianapolis Power & Light Co.	.7	1,200
Inexco Oil Co.	1.4	8,100
Infotron Systems Corp.	.7	10,000
Inland Steel Co.	.7	14,500
Intel Corp.	6.5	475,400
Interco	2.2	37,000
Interfirst Corp.	2.9	225,100
Intergraph Corp.	.7	8,000
Interlake	.7	1,800
Intermedics	.7	23,000
Int'l Flavors & Fragrances	1.4	33,000
Int'l Minerals & Chemicals Corp.	.7	3,900
Int'l Multifoods Corp.	.7	3,700
Int'l Paper Co.	5.8	404,700
Int'l Telephone & Telegraph	6.5	225,337
Internorth	.7	41,800
Interpublic Group of Cos.	.7	87,800
Iowa-Illinois Gas & Electric Co.	.7	25,000
IPL Systems	.7	23,000
Irving Bank Corp.	.7	40,000
Irwin Toy Ltd.	.7	17,000
Itek Corp.	.7	10,000
IU Int'l Corp.	.7	47,000
Jacobs Engineering Group	.7	900
James River Corp. of Virginia	1.4	54,500
Jefferson-Pilot Corp.	.7	12,000
Jerrico	.7	12,500
Jewel	2.9	112,800
Johnson Controls	1.4	53,880
Johnson & Johnson	23.2	1,841,331
Joslyn Mfg. & Supply Co.	.7	3,000
Jostens	1.4	27,000
Joy Mfg. Co.	.7	2,000
JWT Group	2.2	43,000
K Mart Corp.	8.0	277,700
Kaiser Cement Corp.	2.2	58,316
Kaneb Services	.7	2,000
Kansas City Power & Light Co.	1.4	41,672
Kansas City Southern Industries	2.2	48,300
Karcher (Carl) Enterprises	.7	21,000
Keller Industries	.7	9,000
Kellogg Co.	2.2	42,800
Kelly-Johnson Enterprises	.7	9,500
Kemper Corp.	2.2	30,127
Kerr-McGee Corp.	3.6	51,100
Key Pharmaceuticals	.7	3,000
Kidde	.7	27,700
Kimberly-Clark Corp.	2.9	85,872
Kinder-Care Learning Centers	2.2	439,925
Knight-Ridder Newspapers	3.6	117,600
Kollmorgen Corp.	.7	15,000
Kratos	.7	85,000
Kroger Co.	4.3	193,524
Kulicke & Soffa Industries	.7	2,000
Kyocera Int'l	.7	50,700
La Quinta Motor Inns	2.9	68,133
Lance	2.2	28,800
Lane Co.	.7	5,200
Lanier Business Products	.7	15,000
Lawter Chemicals	.7	25,000
Lear Siegler	2.2	152,800
Leaseway Transportation Corp.	1.4	85,500
Lee Data Corp.	.7	4,130
Lennar Corp.	.7	1,610
Lenox	2.2	41,600
Levi Strauss & Co.	1.4	8,500
Lifemark Corp.	.7	30,000
Lilly (Eli) & Co.	6.5	85,350
Limited Stores	.7	20,000
Lin Broadcasting Corp.	2.2	99,100
Lincoln National Corp.	1.4	27,700
Litton Industries	2.9	394,566
Lockheed Corp.	.7	10,000
Loews Corp.	.7	99,100
Lone Star Industries	1.4	19,432
Longs Drug Store	.7	400
Loral Corp.	2.9	33,300
Louisiana Land and Exploration	1.4	23,000
Louisiana Pacific Corp.	1.4	4,837
Lowe's Cos.	.7	40,900
LTV Corp.	.7	14,000
LTX Corp.	.7	4,000
Lubrizol Corp.	2.2	47,600
Luby's Cafeteria	1.4	20,900
Luria (L.) & Son	2.2	34,000
M/A-Com	4.3	127,500
Masonite Corp.	2.2	32,300
Macy (R. H.) & Co.	4.3	144,400
Magic Chef	.7	4,000
Magnetic Controls Co.	.7	6,000
Manor Care	.7	45,000
Manufacturers Hanover Corp.	2.2	642,800
MAPCO	3.6	37,887
Marion Laboratories	.7	13,000
Marriott Corp.	.7	17,800
Marsh & McLennan Cos.	.7	30,000
Mary Kay Cosmetics	2.2	874,800
Maryland Cup Corp.	.7	46,700
Masco Corp.	6.5	106,700
Materials Research Corp.	.7	5,333
Mattel	2.2	59,000
May Department Stores Co.	1.4	60,000
Maytag Co.	1.4	10,300
MCA	2.2	116,700
McCormick	.7	2,700
McDermott	1.4	72,000
McDonald's Corp.	8.7	652,150
McDonnell Douglas Corp.	3.6	70,500
McGraw-Edison Co.	1.4	37,000
McGraw-Hill	4.3	50,150
MCI Communications Corp.	17.4	973,500
McRae Consolidated Oil & Gas	.7	80,000
M D National Corp.	.7	25,300
Mead Corp.	.7	30,000
Medtronic	2.9	13,750
MEI Corp.	.7	1,000
Mellon National Corp.	.7	1,000
Melville Corp.	1.4	346,700
Melville Knitwear Co.	2.2	71,300
Mentor Corp.	.7	1,000
Mercantile Stores Co.	.7	3,000
Merck & Co.	14.5	251,302
Merrill Lynch & Co.	3.6	283,400
Mesa Offshore Trusts	1.4	38,000
Mesa Petroleum Co.	2.2	45,000
Micel Corp.	.7	47,300
Micom Systems	.7	3,135
Mid-Con Telephone Corp.	2.2	38,800
Middle South Utilities	3.6	179,917
Midland-Ross Corp.	1.4	65,000
Midway Airlines	1.4	136,000
Miller (Herman)	.7	12,000
Millipore Corp.	1.4	32,000
Minnesota Mining & Mfg. Co.	13.0	195,150
Mission Insurance Group	1.4	43,500
Missouri Pacific Corp.	.7	14,000
Mitchell Energy & Development	.7	12,000
Mitel Corp.	3.6	152,700
Mobil Corp.	9.4	1,886,489
Mohawk Data Sciences Corp.	2.2	241,000
Monsanto Co.	8.0	371,010
Montana Power Co.	1.4	45,000
Moore McCormack Resources	.7	88,650
Morgan (J. P.) & Co.	8.7	301,652
Morrison	1.4	23,450
Morrison-Knudsen	3.6	130,200
Morse Shoe	.7	40,000
Motorola	7.2	330,923
MTS Systems Corp.	.7	10,000
Multimedia	.7	8,000
Murphy (G. C.) Co.	.7	2,000
Murphy Oil Corp.	2.2	40,900
Nabisco	7.2	109,852
Nalco Chemical Co.	1.4	57,000
National Computer Systems	.7	1,500
National Convenience Stores	2.2	100,750
National Distillers & Chemical	.7	8,500
National Gypsum Co.	.7	17,200
National Medical Care	.7	16,000
National Medical Enterprises	5.1	142,394
National Semiconductor Corp.	1.4	70,500
National Service Industries	.7	7,200
National Standard Co.	.7	9,600
Natomas Co.	1.4	55,000
NBI	2.2	24,000
NCNB Corp.	1.4	184,400
NCR Corp.	2.9	22,800
Network Systems Corp.	.7	1,000
New England Electric System	2.2	33,000
Newmont Mining Corp.	1.4	12,532

Stock	% of Funds Holding	Number of Shares Held
Newport Corp.	1.4	36,025
Niagara Mohawk Power Corp.	.7	2,000
Nicor	.7	1,500
Nielsen (A. C.) Co.	3.6	43,100
Nike	2.2	30,900
NL Industries	4.3	151,300
Noble Affiliates	2.2	488,800
Nordstrom	.7	10,000
Norfolk Southern Corp.	11.6	336,340
Northern Indiana Public Service	2.2	77,025
Northern States Power Co.	2.2	112,700
Northern Telecom Ltd.	2.2	131,000
Northrop Corp.	.7	45,000
Northwest Airlines	3.6	101,100
Northwest Bancorp.	1.4	10,000
Northwest Energy	.7	2,200
Northwest Industries	.7	41,400
Norton Co.	.7	10,000
Norton Simon	2.2	290,000
Novo Industries	4.3	85,500
Noxell Corp.	.7	5,000
Nutri/System	.7	33,000
Oak Industries	1.4	33,000
Occidental Petroleum Corp.	.7	81,464
Ocean Drilling & Exploration Co.	1.4	12,500
Ogden Corp.	.7	89,220
Ogilvy & Mather	.7	20,000
Ohio Casualty	.7	2,100
On-Line Software Int'l	.7	350
Oshman's Sporting Goods	.7	315,000
Overnight Transportation Co.	1.4	176,500
Owens-Corning Fiberglass Corp.	2.9	62,106
Owens-Illinois	.7	16,100
Oxoco California	1.4	51,000
Ozark Air Lines	2.2	77,800
Paccar	.7	600
Pacific Gas & Electric Co.	2.2	62,600
Pacific Power & Light Co.	.7	9,000
Pacific Scientific Co.	.7	1,000
Pall Corp.	2.9	17,132
Pan American Banks	.7	3,200
Pandick Press	2.9	27,300
Panhandle Eastern Pipeline	2.2	4,100
Par Technology Corp.	.7	255
Paradyne Corp.	.7	10,000
Parker Drilling Co.	2.9	67,700
Parker-Hannifin Corp.	.7	5,450
Pay Less Drug Stores Northwest	.7	33,400
Pay 'N Pak Stores	.7	17,300
Pay-N-Save Corp.	.7	3,000
Payless Cashways	2.2	21,000
Peabody Int'l Corp.	.7	14,000
Penn Central Co.	2.9	35,150
Penney (J. C.) Co.	12.3	937,200
Pennwalt Corp.	.7	3,283
Pennzoil Co.	2.9	20,000
Peoples Bancorp.	.7	4,000
Peoples Energy Corp.	.7	22,500
Pep Boys—Manny, Moe & Jack	.7	400
Pepsico	13.0	274,800
Perkin-Elmer Corp.	3.6	49,500
Petrie Stores Corp.	2.2	37,750
Petrolite Corp.	.7	30,000
Pfizer	15.2	603,248
Phelps Dodge Corp.	.7	500
PHH Group	2.2	130,000
Phibro-Salomon Corp.	9.4	700,000
Philadelphia National Corp.	.7	5,992
Philip Morris	21.0	799,093
Phillips (Pete) Co.	1.4	17,400
Philips Petroleum Co.	10.1	193,600
Piccadilly Cafeterias	1.4	211,700
Pic "N" Save Corp.	2.2	51,500
Piedmont Aviation	.7	20,000
Pillsbury Co.	2.2	112,957
Pioneer Corp.	3.6	247,300
Pioneer Hi-Bred Int'l	2.9	132,300
Pitney Bowes	2.9	42,751
Pittsburgh National Corp.	1.4	40,400
Pittston Co.	2.2	8,000
Pizza Time Theatre	.7	35,000
Pizza Ventures	.7	8,000
Pneumo Corp.	.7	71,150
Pogo Producing Co.	1.4	11,800
Policy Mgmt. System Corp.	.7	21,500
Ponderosa	.7	16,700
Pope, Evans & Robbins	.7	202,000
Portland General Electric Co.	.7	8,000
PPG Industries	5.8	102,548
Prairie Producing Co.	.7	5,000
Preferred Risk Life Insurance	.7	3,000
Premier Industrial Corp.	.7	35,000
Prentice-Hall	1.4	79,700
Prime Computer	3.6	65,900
Prime Motor Inns	3.6	205,254
Proctor & Gamble Co.	17.4	318,048
PSA	1.4	58,000
Public Svc. Co. of Colorado	.7	1,500
Public Svc. Co. of Indiana	5.1	79,700
Public Svc Co. of New Mexico	3.6	27,800
Public Svc. Electric & Gas Co.	1.4	110,300
Puget Sound Bancorp	.7	660
Puget Sound Power & Light Co.	1.4	15,000
Pullman	.7	8,000
Pulte Home Corp.	.7	2,993
Quadrex Corp.	.7	7,800
Quaker Oats Co.	5.1	95,800
Quaker State Oil Refining Corp.	.7	15,000
Quanex Corp.	.7	15,000
Quantum Corp.	.7	4,500
Quotron Systems	2.9	35,460
Radiation System	.7	31,500
Rainier Bancorp.	.7	12,000
Ralston Purina Co.	3.6	152,900
Ransburg Corp.	.7	8,000
Ratliff Drilling & Exploration	.7	15,000
Raychem Corp.	.7	300
Raymond Engineering	.7	45,000
Raytheon Co.	15.9	332,500
RCA Corp.	.7	13,500
Reading & Bates Corp.	1.4	28,950
Recognition Equipment	.7	5,000
Redken Laboratories	.7	3,000
Reeves Communications Corp.	2.9	95,000
Regency Electronics	.7	21,800
Republic Bancorp.	2.2	49,700
Republic Steel Corp.	.7	14,700
Reuter	.7	33,750
Revco D. S.	2.9	103,500
Revlon	3.6	53,200
Rexham Corp.	.7	92,000
Reynolds (R. J.) Industries	8.0	84,300
Richardson-Vicks	2.2	31,000
Rio Grande Industries	2.9	24,700
Rite Aid Corp.	2.9	63,032
Roadway Services	2.2	196,900
Robins (A. H.) Co.	2.2	124,700
Rockwell Int'l Corp.	.7	50,000
Rohm & Haas Co.	.7	68,200
Rollins	.7	15,000
Rolm Corp.	3.6	66,900
Rorer Group	2.2	55,400
Rowan Cos.	2.2	26,400
Royal Dutch Petroleum Co.	2.2	1,088,500
RPM	1.4	55,000
Rubbermaid	1.4	56,800
Russell Corp.	2.2	79,300
Ryan Homes	1.4	7,993
Ryder Systems	2.9	102,470
Ryland Group	1.4	19,130
Safeco Corp.	1.4	7,150
Safety-Kleen Corp.	.7	150,000
Safeway Stores	.7	18,200
St. Paul Cos.	2.2	18,400
St. Regis Paper Co.	2.9	79,700
San Bar	.7	40,000
San Diego Gas & Electric Co.	1.4	30,200
Sanders Assocs.	.7	4,000
Santa Fe Industries	5.1	221,900
SCA Services	.7	13,800
Schering-Plough Corp.	7.2	120,900
Schlumberger Ltd.	23.9	1,261,128
SCI Systems	1.4	52,350
Scientific-Atlanta	2.2	111,700
SCM Corp.	.7	27,000
SCOA Industries	2.2	4,000
Scott & Fetzer Co.	.7	42,800
Scotty's	2.9	25,300
Scovill	.7	30,200
Sea Galley Stores	.7	6,000
SeaCo	1.4	21,500
Seafirst Corp.	.7	4,000
Seagram Co. Ltd.	.7	10,700
Sealed Air Corp.	2.2	18,500
Searle (G. D.) & Co.	2.2	80,950
Sears, Roebuck & Co.	6.5	840,400
Security Pacific Corp.	2.9	25,416
Security Pacific Euro Floating	.7	250,000
Sedco	1.4	58,425
Sensormatic Electronics Corp.	5.1	58,950
Service Merchandise Co.	2.2	49,900
Servicemaster Industries	2.2	24,200
SFN Cos.	.7	45,500
Shaklee Corp.	1.4	33,500
Shared Medical Systems Corp.	.7	11,000
Shell Oil Co.	3.6	85,100
Sheller-Globe Corp.	1.4	52,500
Sherwin-Williams Co.	1.4	66,000
Shoney's	.7	9,000
Sierra Research Corp.	.7	2,500
Signal Cos.	4.3	940,891
Silicon Systems	.7	10,000
Simmonds Precision Products	.7	30,000
Singer Co.	.7	5,000
Smith Int'l	1.4	22,000
Smith, Kline & French Labs	.7	1,500
SmithKline Beckman Corp.	14.5	619,735
Snap-On Tools Corp.	5.1	79,000
Sonat	8.7	198,600
Sonoco Products Co.	.7	6,800
Sony Corp. of America	3.6	152,000
Soo Line Railroad Co.	.7	12,000
South Carolina Elec. & Gas Co.	.7	20,000
Southdown	.7	3,811
Southeast Banking Corp.	1.4	21,600
Southern Calif. Edison Co.	6.5	138,650
Southern Co.	2.2	190,800
Southern Pacific Co.	2.9	39,400
Southland Corp.	1.4	50,110
Southwest Airlines Co.	2.2	55,000
Southwest Florida Banks	.7	16,000
Southwestern Public Svc. Co.	1.4	74,500
Spectradyne	1.4	64,000
Sperry Corp.	3.6	120,927
Springs Industries	1.4	22,000
Square D Co.	2.2	85,756
Squibb Corp.	3.6	77,400
Staley (A. E.) Mfg. Co.	2.2	42,100
Standard Brands Paint Co.	1.4	36,200
Standard Oil Co. of Calif.	15.2	409,022
Standard Oil Co. (Indiana)	16.7	219,752
Standard Oil (Ohio)	10.1	568,200
State Street Boston Corp.	2.2	36,300
Stauffer Chemical Co.	3.6	73,000
Sterling Drug	2.2	38,000
Stewart Information Services	.7	2,500
Stewart & Stevenson	2.9	47,050
Storage Technology Corp.	1.4	42,000

Stock	% of Funds Holding	Number of Shares Held
Storer Broadcasting	.7	25,000
Stride-Rite Corp.	.7	68,000
Stryker Corp.	.7	3,000
Subaru of America	2.9	143,900
Suburban Propane Gas Corp.	.7	8,660
Sun Co.	.7	73,000
Sundance Oil Co.	.7	5,000
Sunstrand Corp.	5.1	55,828
Super Valu Stores	2.9	138,500
Superior Oil Co.	5.8	1,451,500
Supermarkets General Corp.	2.2	72,400
Syntex Corp.	4.3	108,700
Sysco Corp.	5.1	101,900
Systematics	1.4	37,500
Systems & Computer Technology Corp.	.7	22,100
Taft Broadcasting Co.	2.2	18,100
Tampax	1.4	8,000
Tandem Computers	.7	10,000
Tandon Corp.	.7	6,900
Tandy Corp.	7.2	504,656
TDK Electronics	.7	13,000
Tech Sym Corp.	.7	28,600
Teco Energy	2.2	44,500
Tektronix	3.6	54,674
Teleco Oilfield Services	.7	21,500
Teledyne	2.9	132,500
Teleflex	.7	6,300
Telepictures Corp.	1.4	125,300
Telesciences	.7	7,500
Telex Corp.	1.4	239,065
Templeton Agency	.7	7,000
Tennant Co.	.7	60,000
Tenneco	5.1	153,704
Tera Corp.	.7	1,000
Teradyne	1.4	32,700
Texaco	2.9	79,600
Texas Air	.7	11,500
Texas American Bancshares	.7	35,000
Texas Commerce Bank	2.9	21,000
Texas Eastern Corp.	1.4	32,300
Texas Gas Transmission Corp.	5.1	107,600
Texas Industries	.7	1,500
Texas Instruments	7.2	41,050
Texas Oil & Gas Corp.	16.7	1,111,380
Texas Utilities Co. System	10.1	1,526,642
Texcan	.7	36,375
Textron	.7	2,500
Thomas Industries	.7	49,400
Tidewater	2.2	49,100
Time	2.9	29,381
Times Mirror Co.	2.9	13,600
Timken Co.	.7	500
TOCOM	.7	14,000
Todd Shipyards Corp.	1.4	13,900
Towle Mfg.	.7	23,000
Toys "R" Us	4.3	364,850
Tracor	.7	15,000
Transamerica Corp.	2.2	92,400
Transco Energy Co.	1.4	30,000
Travelers Corp.	.7	10,200
TRE Corp.	.7	11,000
Trinity Industries	.7	10,000
Trust Co. of Georgia	.7	12,000
TRW	2.9	45,000
Tucson Electric Power	.7	187,600
Tyco Laboratories	.7	6,000
Tymshare	.7	4,000
Union Camp Corp.	2.9	25,600
Union Carbide Corp.	6.5	137,137
Union Oil Co. of Calif.	10.1	171,100
Union Pacific Corp.	11.6	320,375
United Air Lines	.7	8,299
United Brands Co.	.7	7,000
United Cable Television Corp.	.7	16,500
United Energy Resources	2.2	78,750
U.S. Air	2.2	134,288
U.S. Bancorp.	2.2	20,875
USF&G Corp.	5.1	46,700
U.S. Home Corp.	1.4	57,500
U.S. Leasing Int'l	2.2	14,717
U.S. Trust Corp.	.7	500
United States Gypsum Co.	1.4	26,700
United States Shoe Corp.	2.9	85,500
United States Surgical Corp.	2.9	82,500
United States Tobacco Co.	2.2	7,900
United Technologies Corp.	7.2	107,200
United Telecommunications	3.6	119,436
Unitrode Corp.	1.4	44,000
Universal Health Services	1.4	144,000
Universal Leaf Tobacco Co.	.7	13,000
Upjohn Co.	2.9	44,700
Utah Power & Light Co.	2.2	40,300
Valero Energy Corp.	.7	3,000
Valley National Corp.	1.4	35,200
Varian Assocs.	2.2	25,953
Verbatim Corp.	1.4	60,000
V. F. Corp.	2.2	45,000
Viacom Int'l	.7	14,400
Virginia Electric & Power Co.	.7	2,300
Virginia National Bancshares	1.4	41,200
Wachovia Corp.	1.4	21,900
Wal-Mart Stores	5.8	83,298
Walgreen Co.	.7	15,000
Walter (Jim) Corp.	1.4	13,100
Wang Laboratories	8.0	539,000
Warnaco	2.2	206,200
Warner Communications	8.0	143,671
Warner-Lambert Co.	4.3	78,200
Waste Management	10.1	208,400
Watkins-Johnson Co.	1.4	50,400
Weigh Tronix	.7	10,000
Wells Fargo & Co.	2.2	20,300
Wendy's Int'l	3.6	167,150
Westburne Int'l	.7	13,000
Western Air Lines	.7	400,000
Western Co. of North America	1.4	21,800
Western Union Corp.	2.2	88,750
Westinghouse Electric Corp.	7.2	107,050
WestPoint Pepperell	.7	30,000
Westvaco Corp.	1.4	39,100
Weyerhauser Co.	8.7	506,322
Wheelabrator-Frye	1.4	17,400
Whirlpool Corp.	6.5	147,500
White Consolidated Industries	.7	11,000
Whittaker Corp.	2.9	215,500
Willamette Industries	.7	7,009
Williams Cos.	.7	1,500
Williams Electronics	.7	750
Wilson (H. J.) Co.	2.9	1,275,040
Winn-Dixie Stores	.7	17,500
Winners Corp.	.7	35,000
Wisconsin Electric Power Co.	1.4	19,350
Wisconsin Power & Light Co.	.7	10,000
Wisconsin Public Svc. Corp.	.7	10,000
Wometco Enterprises	1.4	34,100
Woods Petroleum Corp.	.7	72,000
Woolworth (F. W.) Co.	1.4	17,000
Worthington Industries	.7	12,000
Wright (Barry) Corp	1.4	27,000
Xerox Corp.	6.5	136,300
Zapata Corp.	1.4	23,500
Zayre Corp.	1.4	32,000
Zurn Industries	.7	10,000

The drop-ins

Aaron Rents
ADAC Laboratories
Altos Computer System
Ambesco Industries
Amdahl Corp.
Analog Devices
Anchor Hocking Corp.
Anixter Brothers
Apogee Enterprises
Avery Int'l Corp.
Baltimore Gas & Electric Co.
Barnes Group
Boise Cascade Corp.
Bolar Pharmaceutical
Brush Wellman
Campbell Red Lake Mines
Central Louisiana Electric Co.
Charming Shoppes
Chemical New York Corp.
Chomerics
Chubb Corp.
Cincinnati Gas & Electric Co.
Citizens Utilities Co.
Cluett, Peabody & Co.
Coleman Co.
Collaborative Research
Comprehensive Care Corp.
ConAgra
CPT Corp.
Crawford & Co.
Cullum Cos.
Custom Energy
Dean Foods Co.
Detroit Edison Co.
Digital Switch
Dillon Cos.
Drexler Technology Corp.
Enterra Corp.
Fidelity Fed. Savings & Loan Assn.
First Oklahoma Bancorp.
Fuller (H. B.) Co.
Gelco Corp.
Genex Corp.
Gibraltar Financial Corp.
Global Marine
Godfathers Pizza
Great Lakes Chemical Corp.
Hartford National Corp.
Hershey Foods Corp.
Hillenbrand Industries
Imperial Corp. of America
Karcher (Carl) Enterprises
Key Pharmaceuticals
Kyocera Int'l
Lee Data Corp.
Lennar Corp.
Lockheed Corp.
LTX Corp.
Manor Care
Marriott Corp.
Mary Kay Cosmetics
Mattel

May Department Stores Co.
McCormick
Murphy (G.C.) Co.
National Gypsum Co.
Niagara Mohawk Power Corp.
Nordstrom
Northwest Energy
Noxell Corp.
On-Line Software Int'l
Pacific Scientific Co.
Par Technology Corp.
Parker-Hannifin Corp.
Pay 'N Pak Stores
Pep Boys—Manny, Moe and Jack
Philadelphia National Corp.
Pittsburgh National Corp.
Ponderosa
Pope, Evans & Robbins
Public Svc. Co. of Colorado
Pulte Home Corp.
Quotron Systems
Ratliff Drilling & Exploration
Safety Kleen Corp.
San Diego Gas & Electric Co.
Scovill
Shared Medical Systems Corp.
Sheller-Globe Corp.
Sierra Research Corp.
South Carolina Electric & Gas Co.
Southdown
Southern Co.
Storer Communications
Systems & Computer Technology Corp.
Tampax
Tandon Corp.
Tech Sym Corp.
Teleflex
Telesciences
Tera Corp.
Texcan
Thomas Industries
TOCOM
Todd Shipyards Corp.
Tucson Electric Power Co.
Tymshare
United Air Lines
United Cable Television Corp.
U.S. Trust Corp.
Walgreen Co.
Western Air Lines
Wilson (H.J.) Co.
Winn-Dixie Stores
Worthington Industries

The drop-outs

Adobe Oil & Gas Co.
Air Florida
Alexander & Alexander
Allis-Chalmers Corp.
AMAX
American Agronomics Corp.
American Airlines
American Cable TV Industries
American Micro System Industries
American Natural Resources Co.
American Quasar Petroleum Co.
AMF
Amstar Corp.
Amsted Industries
Anacomp
Anderson Clayton
Andrew Corp.
Anheuser-Busch Cos.
Apache Corp.
Arvin Industries
Ashland Oil
Beckman & Gast
Beckman Instruments
Beker Industries Corp.
Bendix Corp.
Biomedical Reference Laboratories
Bio-Rad Laboratories
Bradford National Corp.
Brown (Tom)
Brunswick Corp.
Burndy Corp.
Burnup & Sims
Campbell Taggart
Central Tel. & Utilities Corp.
Centuri
Chemical New York Corp.
Chemical Nuclear System
Chesapeake Corp.
Chieftain Development, Ltd.
Cities Service Co.
CMI Corp.
Coleco Industrial
Colonial Life & Accident Ins. Co.
Columbia Pictures Industries
Com Systems
Connecticut General Ins. Corp.
Consolidated Papers
Continental Illinois Corp.
Cordura Corp.
Cowles Communications
Crown Zellerbach Corp.
Crutcher Resources Corp.
Cummins Engine Co.
Delta Drilling
Dennison Mfg. Co.
Dentsply Int'l
Docutel
Dome Petroleum Ltd.
Dorchester Gas Corp.
Dynatech Corp.
Edison Bros. Stores
Electro Nucleonics
Ellis Banking
El Paso Co.
Engelhard Minerals & Chemicals
Bob Evans Farms
Evans Products
Evans & Sutherland Computer Corp.
Federal Nat'l Mortgage Assn.
Federated Investors
First City Bank Corp. of Texas
First Int'l Bancshares
Foster (L.B.) Co.
Four Phase Systems
Foxboro Co.
Franklin Electric Co.
Fremont General Corp.
Fuqua Industries
Galveston Houston Co.
Gandalf Technologies
Gates Lear Jet Corp.
GCA Corp.
General Automotive Parts Corp.
General Nutrition
General Tel. & Electronics Corp.
Geo Int'l Corp.
Gerber Scientific Instruments Co.
Gordon Jewelry Corp.
Great Western Financial Corp.
Grow Group
Gulf States Utilities
Hammermill Paper Co.
Harcourt Brace Jovanovich
Hexcel Corp.
Hizer Corp.
Hoover Universal
Household Financial
Hubbell (Harvey)
INA Corp.
Ingersoll-Rand
Int'l Harvester
Jhirmack Enterprises
Kaiser Aluminum & Chemical Corp.
Kallestad Laboratories
Kevex Corp.
Keystone Int'l
KLM Royal Dutch Airlines
Koppers
Liberty Corp.
Liberty National
Lucky Stores
Lukens Steel
Mallinckrodt
Marathon Oil
Marshall Field & Co.
Martin Marietta Corp.
May Petroleum Co.
Measurex Corp.
Mercantile Texas Corp.
Metro-Goldwyn-Mayer
MGIC Investment Corp.
MGM Grand Hotels
Microsonics Corp.
Milton Bradley Co.
Mobot Corp.
Monarch Capitol Corp.
Mountain Fuel Supply
MX
National Presto Industries
Nicklos Oil & Gas Co.
NLT Corp.
Norfolk & Western Railway Co.
Numac Oil & Gas
Oklahoma Gas & Electric Co.
Olin Corp.
Omnicare
Pabst Brewing Co.
Pacific Lumber Co.
Palm Beach Co.
Petrolane
Petroleum Equipment Tools Co.
Phibro Corp.
Planning Research Corp.
Pope & Talbot
Potlatch Corp.
Primark Corp.
Purex Corp.
Redman Industries
Regal Int'l
Republic New York Corp.

Rexnord
Rowan Cos.
Safeguard Business Systems
Safeguard Scientifics
Sanders Associates
Schlitz (Jos.) Brewing Co.
Scott Paper Co.
Sea Containers Ltd.
Seagate Technology
Signode Corp.
Skyline Corp.
Southern Railway Co.
Stokley Van Camp
Superior Surgical
Supron Energy Corp.
Sybron Corp.
Technicolor
Telecommunications Equip. Corp.
Tesoro (Pete) Corp.
Texas Int'l Co.
Thomas & Betts Corp.
Tiger International
Tosco Corp.
Transco Cos.
Triad Systems Corp.
Twin Disc
Tyler Corp.
UAC Resources
UGI Corp.
UMC Industries
Unit Drilling & Exploration
United Energy Resources
United Financial Group
U.S. Home Corp.
USLIFE Corp.
U.S. Steel Corp.
United Technologies Corp.
Universal Foods Corp.
Universal Resources Corp.
Veeco Instruments
Vernitron Corp.
Wainoco Oil
Westmoreland Coal
Wyman Gordon Co.
Zenith Radio Corp.

The favorite fifty

Stock	Rank 1983	Rank 1982	% Funds Holding	Number of Shares Held
IBM Corp.	1	1	47.1	3,464,931
American Telephone & Telegraph Co.	2	3	31.9	1,293,241
General Electric Co.	3	4	30.4	884,842
Atlantic Richfield	4	2	26.8	1,858,942
Eastman Kodak Co.	5	6	25.4	961,761
Schlumberger Ltd.	6	5	23.9	1,261,128
Johnson & Johnson	7	23	23.2	1,841,331
Philip Morris	8	8	21.0	799,093
Hewlett Packard Co.	9	19	21.0	468,750
General Motors Corp.	10	40	18.1	1,274,381
Digital Equipment Corp.	11	11	18.1	621,212
MCI Communications Corp.	12	—	17.4	973,500
Procter & Gamble Co.	13	26	17.4	318,048
Texas Oil & Gas Corp.	14	22	16.7	1,111,380
American Home Products Corp.	15	31	16.7	548,100
Standard Oil Co. (Indiana)	16	9	16.7	219,752
Raytheon Co.	17	13	15.9	332,500
Pfizer	18	16	15.2	603,248
Standard Oil Co. of Calif.	19	14	15.2	409,022
SmithKline Beckman Corp.	20	12	14.5	619,735
Merck & Co.	21	—	14.5	251,302
Exxon Corp.	22	7	14.5	189,150
American Express Co.	23	15	13.8	248,120
Halliburton Services	24	10	13.8	227,550
Pepsico	25	30	13.0	274,800
Bristol-Myers Co.	26	49	13.0	241,054
Minnesota Mining & Mfg. Co.	27	20	13.0	195,150
Penney (J.C.) Co.	28	—	12.3	937,200
Emerson Electric Co.	29	—	12.3	246,431
Norfolk Southern Corp.	30	—	11.6	336,340
Union Pacific Corp.	31	27	11.6	320,375
Abbott Laboratories	32	—	10.9	272,600
Texas Utilities Co. System	33	—	10.1	1,526,642
General Mills	34	—	10.1	574,800
Standard Oil (Ohio)	35	—	10.1	568,200
Waste Management	36	—	10.1	208,400
Phillips Petroleum Co.	37	28	10.1	193,600
Union Oil Co. of Calif.	38	18	10.1	171,100
Mobil Corp.	39	25	9.4	1,886,489
American Hospital Supply Corp.	40	—	9.4	857,300
Phibro-Salomon Corp.	41	—	9.4	700,000
GTE Corp.	42	48	9.4	689,139
Hospital Corp. of America	43	44	9.4	665,755
Dow Chemical Co.	44	34	9.4	375,660
Florida Power & Light Co.	45	—	9.4	165,200
Caterpillar Tractor Co.	46	21	9.4	100,345
McDonald's Corp.	47	—	8.7	652,150
Weyerhauser Co.	48	—	8.7	506,322
Citicorp	49	41	8.7	494,500
Coca-Cola Co.	50	—	8.7	352,225

JUNE 1983

Pension World

The Magazine for Plan Sponsors and Investment Managers/ A Publication of Communication Channels, Inc.

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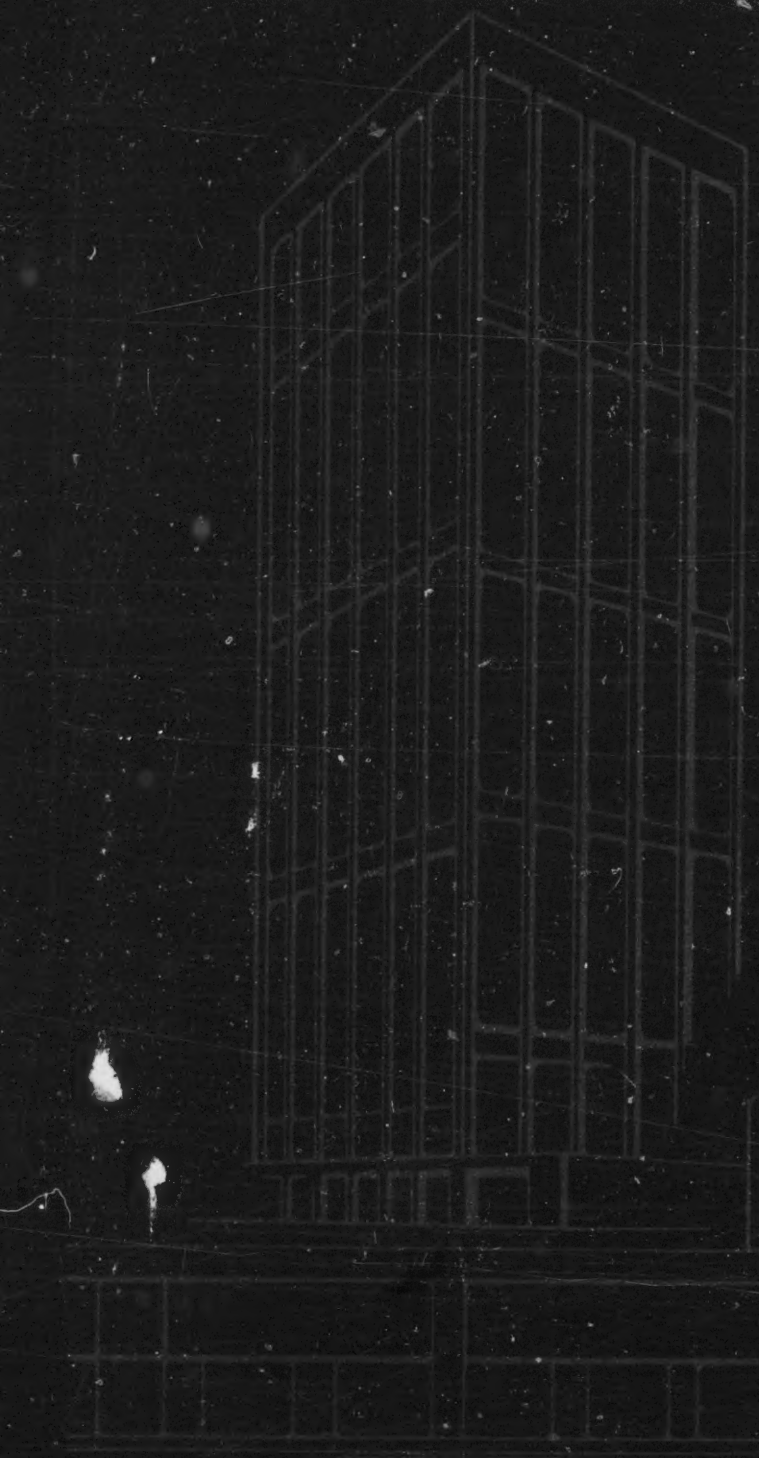

Developing a Real Estate Performance Index

Fees for Real Estate Portfolio Management

The Bull Market in Mutual Funds

Streamlining the Manager Questionnaire

1983 Social Security Amendments

Pension World

June 1983
Volume 19 Number 6

The Magazine for Plan Sponsors and Investment Managers/A Publication of Communication Channels, Inc.

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Real Estate Highlight: Developing a real estate performance index by Blake Eagle **17**
The concept of developing a performance index based on investment properties being acquired and held in newly emerging institutional portfolios was intriguing, says the senior vice president of the Frank Russell Company. Here, he explains how it was done and how it works.

Real Estate Highlight: Fees for real estate portfolio management by James P. Regan **25**
As the management of real estate portfolios for pension funds becomes more sophisticated, property acquisition/disposition fees are being segregated from annual portfolio management fees. This consultant tells the plan sponsor what to look for in the new fee structures.

Investment Management: Issues to consider in social investing by Mary A. Brauer **29**
Social investing of pension assets must satisfy several difficult tests to avoid the serious consequence that it may breach the fiduciary duties imposed on pension plan trustees and sponsors. This attorney points out that many trustees and sponsors, however, have yet to formulate a response to the issue.

Investment Management: Streamlining the manager questionnaire **37**
Recognizing that the manager questionnaire is a prime resource for plan sponsors, consultants, and investment managers, three representative executives address the contents, complexity, and usefulness of the questionnaire—and whether it still serves a valid purpose.
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Investment: The bull market in mutual funds by Ronald A. Jones **49**
From a low point in the mid-1970's, when the future of the mutual fund industry was in doubt, the popularity and returns from mutual funds today are setting records. This consultant for Hewitt Associates says pension fund sponsors are also viewing mutual funds with keen interest.

Pension World Basics: Using mutual funds for defined contribution plans by E. F. Bowditch **72**
The senior vice president of The Vanguard Group of Investment Companies takes a close look at the use of mutual funds for defined contribution pension plans, including selection of vehicles, subaccounting and other services, and investment performance.

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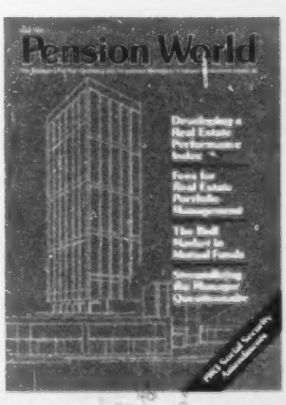

Cover: **The inclusion of real estate in pension portfolios continues to interest plan sponsors as data on this investment vehicle become more standardized. Beginning on page 17, *Pension World* looks at two refinements that are generating interest.**

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Growing pains in U.K. private health care

Complete health care in the United Kingdom is available free of all charges to all U.K. citizens as well as citizens of the Common Market and non-U.S. citizens who are residents under the National Health Scheme (NHS). Under the NHS, each person is required to register with a local general practitioner who provides routine medical care. Only the general practitioner can arrange for specialized treatments, *e.g.*, surgery, consultants, etc.

NHS also provides, free of charge, complete inpatient and outpatient treatment in hospitals as well as surgical care. On the whole, NHS has provided the ordinary citizen with access to a very good level of medical treatment without financial worry to the patient and his family.

However, NHS seems to break down in the area of non-urgent hospital treatment. In many instances, the waiting lists for non-emergency surgical treatment are very long.

Private medical schemes

Against this background, a number of nonprofit organizations and insurers who offer private medical schemes have sprung up in the U.K.

The three nonprofit medical associations are the British United Provident Assn. (BUPA), Private Patients Plan (PPP), and Western Provident Assn. (WPA). Total membership for the three and the changes in membership during 1982 are shown in the accompanying table. Most memberships also include dependents, and it is estimated that about 4,250,000 individuals are now covered by private health insurance as compared with 4,100,000 in 1981.

Growth, in numbers of persons taking out private medical insurance, slowed dramatically in 1982.

Table I U.K. Membership of the Major Provident Associations*

	Individual Year-end 1982	(Direct) Change on year	Group Year-end 1982	Group Change on year	Total Year-end 1982	Total Change on year
BUPA	376,497	+2.5%	1,002,290	−2.5%	1,378,787	−1.2%
PPP	147,194	+1.5%	245,382	+17.8%	392,576	+11.1%
WPA	22,668	+35.7%	122,344	+25.6%	145,012	+27.1%
Total	546,359	+3.3%	1,370,016	+2.7%	1,916,375	+2.9%

*Excluding Hong Kong members

The three major provident associations, who account for 95 percent of the medical insurance market, increased their membership by only 3 percent. When compared to the growth rates in the previous three years, which exceeded 10 percent per year, 1982 was a poor growth year. The slowdown in growth in the "Group" sector can be attributed to the recession, which hit companies' abilities to meet contribution costs.

Hospital bed oversupply

Britain has some 36,000 beds in 11,000 hospitals and resident nursing homes in the private sector. There are 13 additional private hospitals under construction, which will add another 689 beds in the private sector. There are also proposals to build 45 private hospitals, which would add another 2,636 new beds.

by **VINCENT J. SIMONE**
Director, Godwins Limited
Executive Vice President
Hall-Godwins (Overseas) Consulting Co.
Editor, International Benefits
Information Service (IBIS)
Farnborough, England

In selling their products, the associations have strongly promoted the benefits of private medical treatment. The public has found that the private sector has met those claims of privacy, luxury, and avoidance of delays in getting treatment. Having sampled private medical treatment *once*, people are using it again and again for trivial ailments. The associations are experiencing a strong rise in the number of claims, including the use of outpatient facilities, in the private sector. Also, there has been a rising number of claims from women who are insured through their husbands' contracts.

The growing pains of Britain's private health industry were recently highlighted by the decision of BUPA to limit the fees it would reimburse private profit-making hospitals that are not owned by BUPA.

Provident associations are suffering from the same current illnesses also affecting the U.K. insurance industry—reduced growth, growing competition, and a massive increase in claims.

(Continued on page 75)

Developing a real estate performance index

Though a group of real estate professionals recognized some years ago that a property-level index was worth pursuing, gathering reliable data was a more complex task.

The corporate pension officer glanced away from the package of material he was holding in his hand and for a moment stared off into space. Then he turned to me and said, "Damn it, I intuitively believe that equity real estate is a superior hedge against high rates of unanticipated inflation, that over time it can produce competitive real rates of return, and that it will assist in lowering overall portfolio volatility. Now, how do I convince an investment committee that our pension fund should allocate up to 15 percent of plan assets to equity real estate without any quantitative material to support my intuition? . . . What I need is a real estate index. Find me the real estate equivalent of the S&P 500."

The concept of developing a real estate performance index based on investment properties being acquired and held in newly emerging institutional portfolios was intriguing. Pension funds were going to have to accept the fact that up until now there was no index—but why not start one from scratch?

Determining the need

Over the next several months, discussions were held with real estate managers, with the suggestion that a new property-level rate-of-return index be developed, using as the data base performance information drawn exclusively from their institutionally owned portfolios. The argument went on that these properties could better lend themselves to creating a performance measurement system because of their homogeneous characteristics. Most of the properties had been purchased for all cash. Each portfolio was independently audited. The motivation for acquisition was pure investment. The investors were all tax-exempt, passive institutions who had committed their capital to professional managers who, in turn, invested those dollars in property assets—and in all cases the transactions were at arm's length. Further, all the investment managers operated in a fiduciary environment, and the managers employed independent, qualified professional appraisers to estimate market values periodically.

Last, but certainly not least, the managers were reporting performance results on a portfolio basis anyway. Why not take the next step and develop a performance measurement system at the individual property level, thus providing the pension investors with a more detailed measurement and monitoring tool?

by **BLAKE EAGLE**
Senior Vice President
Frank Russell Company
Tacoma, Wash.

People in each organization—particularly those with a quantitative bent—were receptive to this concept. Some of the veteran real estate professionals balked, since they did not want to make available property information to the outside world when they had been operating successfully for all these years without "indexes."

Yet the compelling reason to proceed was obvious. A new breed of equity investor had appeared on the scene—U.S. pension funds. These institutions represented a large resource of capital for real estate investments that had previously gone untapped. However, pension funds were asking, and in some cases demanding, that the real estate industry make available more quantities of reliable information, particularly in the area of performance measurement. If pension officers and administrators were going to convince investment committees to direct money to real estate, then they needed quantities of reliable information to support their allocation recommendations. Also, the information must be able to stand the tests of very inquisitive, if not sometimes skeptical, senior officers and members of the boards of directors.

Gradually, there was recognition that a new property-level index was indeed worth pursuing. After as period of about a year, a group of 14

Exhibit I Data Base
Universe of Properties
(Millions of $)

	Total Market Value	Total Number Of Properties
1977		
December 31	$ 594.4	236
1978		
March 31	599.4	236
June 30	635.6	261
September 30	704.7	285
December 31	751.3	295
1979		
March 31	832.9	310
June 30	952.4	332
September 30	1,092.2	357
December 31	1,258.0	372
1980		
March 31	1,489.2	408
June 30	1,605.9	429
September 30	1,802.5	467
December 31	2,004.5	494
1981		
March 31	2,319.9	528
June 30	2,719.7	570
September 30	3,095.0	623
December 31	3,697.0	682
1982		
March 31	4,120.6	723
June 30	4,515.2	758
September 30	4,692.1	774
December 31	4,905.3	783

Source: *FRC Property Index* and NCREIF

Exhibit II FRC Property Index Data Base
Property Distribution by Size Range
As of December 31, 1982
(Millions of $)

Range	Market Value of Total Index	Market Value of Properties by Percent*	Number of Properties	Number of Properties by Percent
$ 0.0 - 0.99	$ 40.8	0.8%	60	7.7%
$ 1.0 - 2.49	397.1	8.1	232	29.6
$ 2.5 - 4.99	913.4	18.6	249	31.8
$ 5.0 - 9.99	951.2	19.4	139	17.8
$10.0 - 19.99	787.2	16.0	59	7.5
$20.0 - 49.99	1,038.8	21.2	34	4.3
$50.0 And Over	776.7	15.8	10	1.3
Total	$4,905.3	100.0%	783	100.0%

*Total rounded to 100.0%

Source: *FRC Property Index* and NCREIF

Exhibit III FRC Property Index Data Base
Property Distribution by Type
As of December 31, 1982
(Millions of $)

Property Type	Market Value of Total Index	Market Value of Properties by Percent*	Number of Properties	Number of Properties by Percent
Apartments	$ 141.8	2.9%	13	1.7%
Commercial	909.5	18.5	128	16.3
Hotels	163.3	3.3	6	0.8
Industrials	1,350.1	27.5	429	54.8
Offices	2,340.8	47.7	207	26.4
Total	$4,905.3	100.0%	783	100.0%

*Total rounded to 100.0%

Source: *FRC Property Index* and NCREIF

real estate investment managers agreed "in principal" to see if this concept was indeed a workable research project.

Charting a course

An agreement in principal does not translate into immediate results. How to proceed raised numerous complex issues and questions that needed to be addressed. In order to develop a rate-of-return index, the first hurdle was to define the specific information required to measure the investment results of property over time. Then a series of related problems needed to be resolved, such as measurement methodology, frequency of the measurement periods, establishing measurement-related accounting policies, and what types of properties should be included in a property-level rate-of-return index. After the property-type question followed the next step: how to deal with joint ventures, earnouts, developmental projects, leveraged real estate, etc.

There were administrative details to be ironed out. A data reporting process had to be developed to ensure the absolute confidentiality of individual property information, since each manager was adamant that the raw data not be made available to the world at large—an understandable concern and a legitimate request.

The index, if there were going to be one, was to be based on information drawn exclusively from the property portfolios of those investment managers acting solely on behalf of passive tax-exempt pension and profit-sharing trusts. At that time, institutional real estate was very much an emerging business. Therefore, rules had to be agreed upon that would be statistically acceptable with respect to the two very large open-end real estate funds, which at that time were the dominant portfolios in existence. Thus, the issue of manager portfolio weightings needed to be addressed.

Other questions included: When should the index start? Should there be sub-indexes? If so, how many? What constitutes a sufficient number of properties to at least begin to meet the inevitable critics' complaints that the index data base was not a statistically representative sample of a larger universe of investment properties?

Getting the answers

How were all of these issues resolved? Through a series of meetings involving representatives of the investment managers who had agreed "in principal" that a property-level index was a worthwhile pursuit. These meetings, many lasting two days, were held over a period of three years in various locations around the country. Each meeting invariably identified some new issues, which had to be addressed.

Who attended these meetings? Real estate acquisition specialists, portfolio managers, accountants, lawyers, statisticians, appraisers, property managers, and, on a couple of occasions, even actuaries and invited academics. With the exception of the academics, all others were representatives of the investment managers who had "agreed in principal." The organizations that accepted the challenge (alphabetically) were Aetna Life, Bank of America, Coldwell Banker, Crocker National Bank, Equitable Life Assurance, First National Bank of Boston, First National Bank of Chicago, John Hancock Mutual Life Insurance Company, North Carolina National Bank, Prudential Insurance Company of America, The RREEF Corporation, The Travelers Insurance Companies, Wachovia Bank & Trust Company, N.A., and Wells Fargo Realty Advisers.

Exhibit IV

FRC Property Index Data Base Property Distribution by Geographic Region As of December 31, 1982 (Millions of $)

Region	Market Value of Total Index	Market Value of Properties by Percent*	Number of Properties	Number of Properties by Percent
East	$1,123.7	22.9%	105	13.4%
Midwest	922.1	18.8	205	26.2
South	1,184.3	24.1	195	24.9
West	1,675.3	34.2	278	35.5
Total	$4,905.3	100.0%	783	100.0%

*Totals rounded to 100%

Source: *FRC Property Index* and NCREIF

Through these series of meetings, the Index project began to take shape. As progress was made, it became clear to the individuals involved that construction of a property-level index was really only the beginning of what could be done in the way of furthering quantitative research. The index project was resulting in the accumulation of vast amounts of information—data that would lend itself to scholarly research. This activity led to the formation of the National Council of Real Estate Investment Fiduciaries (NCREIF), a nonprofit organization made up initially of these 14 real estate managers, which has as its stated goals "to increase the understanding of real estate as an asset class and as an alternative investment vehicle for pension accounts through the use of advanced analytical techniques."

The formation of NCREIF brought together—in one cohesive group—members of the professional real estate community for the sole purpose of responding to the informational needs of pension

Exhibit V

Source: Frank Russell Company

funds and other similar types of passive institutional investors. The *FRC Property Index* project now had industry authorization and support.

On June 24, 1982, NCREIF and Frank Russell Company jointly announced the formation of the Council and the completion of the development phase of the *FRC Property Index*. Frank Russell Company collects, verifies, and stores all property data and does all of the *Index* return calculations and publication. NCREIF members provide the data and through their working subcommittees have established all of the ground rules and procedures for data reporting. The NCREIF accounting committee, comprised of CPA's, has been particularly active, since accurate and precise performance measurement information is the underpinning of the *Index*.

This project had come a long, long way since that conversation with the corporate pension officer way back in 1976.

Bringing the project to fruition

The purpose of the *FRC Property Index* is to portray the pattern of investment returns of institutionally held real estate. Based on the aggregate market value of all properties in the samples, it expresses the observed market value and income as a percentage of the market value at the beginning point.

The algorithm adopted by Frank Russell Company is generally defined as "market-value weighted" expressed in relatives with the value at December 31, 1977, equal to 100. Each component property is weighted so that it will influence the *Index* in proportion to its respective market importance. The *Index* is computed quarterly, based on current market value and the net income for the quarter.

The Index *can be used to compare the investment results of different real estate managers, though any such comparative analysis should recognize that the* Index *base is strictly comprised of properties free and clear of any underlying debt.*

The *FRC Property Index* provides a measure of the historical rate of return for nonleveraged income-producing properties held exclusively in tax-exempt portfolios. The *Index* is based on the two distinct components of return, income, and changes in market value. Any increase or decrease in market value of any individual property, unless sold, is determined by real estate appraisal methodology. The *Index* investment returns represent an aggregation of individual property returns calculated quarterly. We consider the *Index* to be the starting point in furthering the state-of-the-art of real estate performance measurement. We emphasize the words "starting point" and "state-of-the-art."

The data base consists of investment-grade, income-producing, urban properties, including office buildings, industrial facilities, shopping centers, hotels, and apartment complexes. All *Index* property assets have been acquired on an all-

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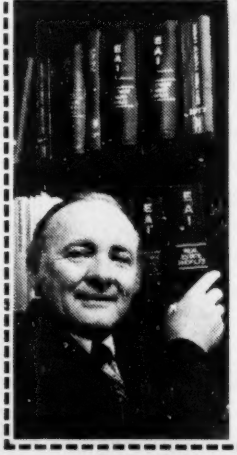

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cash basis, *i.e.*, the data base has no leverage component. It is a requirement for inclusion in the *Index* that the properties be unleveraged. The total data base increases each quarter to the extent that the participating organizations acquire additional properties on an all-cash basis. Properties that are sold are deleted from the count of the number of properties in the quarter in which any such sale occurs.

The *Index* starting date is January 1, 1978. Of the total data base, 236 properties were acquired prior to the starting date; all other properties have been acquired since that date.

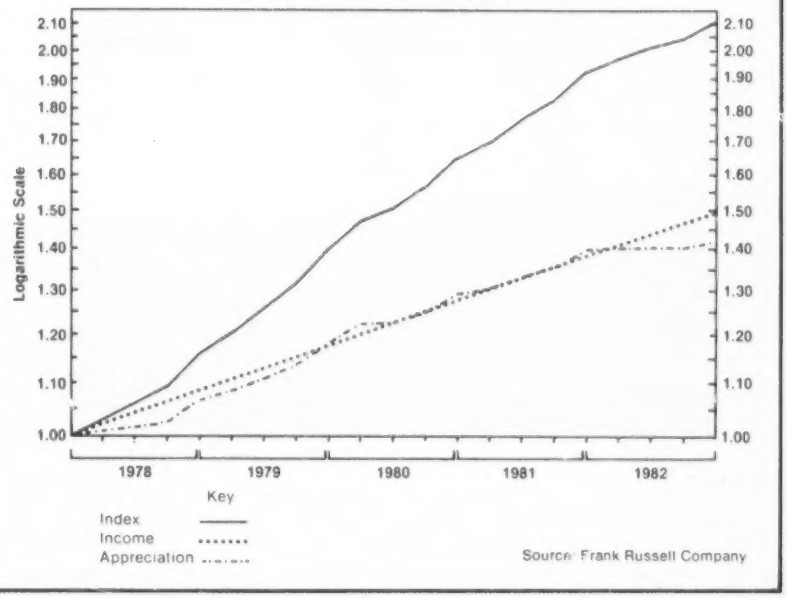
Exhibit I displays the number of properties in the data base for each quarter since inception along with corresponding market values. Exhibit II breaks out the data base by range of investment values both for the number of properties and by market value weightings. Exhibit III sets out the data by the major types of investment properties and shows their weighting by numbers of properties and by market value. The geographical distribution of the data base is presented in Exhibit IV, followed by a map showing the boundaries of the four major regions (Exhibit V).

Exhibit VI displays the investment results of the *Index* from the starting date, January 1, 1978, through year-end 1982. Here, the two components of return are plotted on a logarithmetic scale along with the total rates of return of the *Index*. Income has been the dominant component. These data are pretty convincing evidence that values of investment-grade property are income-driven.

Exhibit VII displays the cumulative *Index* values, again for each individual component of return and the aggregate of these into the total *Index*.

Exhibit VI FRC Weighted Property Index

January 1, 1978 - December 31, 1982



Source: Frank Russell Company

Using the *Index*

How is the *FRC Property Index* to be used? It is a performance measurement product that provides pension fiduciaries with a tool to compare the investment results of property assets with those of their other portfolio investments. It is also a tool from which to gain a better understanding of the derivation of real estate returns. Third, the *Index* provides an expanded base of information that will further pension fiduciaries' knowledge of real estate investments and what contributions this asset class can and cannot provide in a total diversified portfolio setting. Fourth, as more resale history is developed, *Index* properties that are sold can be tracked and compared to their appraisals—in other words, a system to test the valuation process periodically with actual transactions.

The *Index* can be used to compare the investment results of different real estate managers, though any such comparative analysis should recognize that the *Index* data base is strictly comprised of properties free and clear of any underlying debt. Institutional property portfolios hold other assets. The *Index* data base is pure property.

Finally, any performance comparison must take place over comparable periods of time. The driving motivation behind the *Index* was to develop historical real estate rates of return that would allow for comparison of property as a distinct asset class with other investment alternatives—not as a manager comparison tool. Yet the *Index* will be used for this purpose, though caution is advised.

The *FRC Property Index* should

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Exhibit VII **FRC Weighted Property Index**
Cumulative Index Values
As of December 31

Year	Index	Income	Appreciation	
1977	100.0	100.0	100.0	
1978	115.9	108.7	106.7	15.9%
1979	139.8	118.3	118.5	20.6%
1980	164.8	128.2	129.2	17.9%
1981	192.2	138.4	139.8	16.6%
1982	210.1	149.2	141.8	9.3%

Source: *FRC Property Index* and NCREIF

not be used to sell real estate investments to widows, orphans, or pension funds for that matter. The results of the *Index* are not indicative of real estate returns in general since any claim to that effect would be pure nonsense.

Looking to the future

The "successful conclusion" of the development of the *Index* is actually just the starting point of furthering quantitative research and inquiry into real estate. NCREIF is now the center of this activity. The Council, in a short period of time, has not only become organized, it is operational and active—very active. There are now 21 member firms, and these organizations probably manage more than 80 percent of all pension-related real estate portfolios. Interfirst Bank, Dallas, was the 15th founding member and is contributing data in 1983. New member firms include Chase Investors Management Corporation, CIGNA Corporation, Corporate Property Investors, LaSalle Partners Inc., Metropolitan Life, and Morgan Guaranty Trust.

The Council operates through committees. The research committee is already considering the various research alternatives that can be undertaken using the *FRC Property Index* data base. Two prominent real estate academicians, Dr. Jim Grasskampf, University of Wisconsin, and Professor Mike Miles, University of North Carolina, sit as outside advisors. The accounting committee, which has worked overtime in establishing *Index* reporting procedures, is also in communication with some of the major national CPA firms as the first step in dealing with industry reporting standards and practices, particularly as they relate to the fair market value environment in which pension funds must operate.

For many, many years, corporate equities and debt instruments have been the traditional investment outlets for institutional investors. Considerable resources have been allocated to researching the investment behavior of these mediums, including active participation by the academic community. Only in the past decade has real estate been considered as an investment alternative by these same institutional investors. In response, those charged with the fiduciary responsibility of investing in real property are now moving to the research arena. NCREIF and the *FRC Property Index* is a step in that direction. □

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Using mutual funds for defined contribution plans

Probably the most dramatic change in the type and design of qualified employee benefit plans since the passage of ERISA has been the shift from defined benefit plans (or conventional pension plans) to defined contribution plans, including profit-sharing, money purchase, thrift, and stock bonus plans (see Figure I).

The oft-cited reasons for the decline in popularity of defined benefit pension plans (and corresponding shift to defined contribution plans) include:

—the application of ERISA's plan termination insurance provisions to defined benefit pension plans, including the requirement that such plans pay annual premiums to the Pension Benefit Guaranty Corp. (PBGC);

—the application of ERISA's minimum funding standards to pension plans, including the imposition of stiff penalties for the failure of any pension plan to meet the minimum funding standards;

—the application of ERISA's limitations on the investment of defined benefit pension plan assets in securities or real estate of the sponsoring employer;

—the substantial flexibility defined contribution plans (particularly discretionary profit-sharing plans) offer in terms of the level of annual contributions required on the part of the sponsoring employer; and

—the elimination of actuarial fees under a defined contribution plan.

Perhaps more significant, however, has been the economic experience over the late 1970's and early 1980's, which has served to highlight the fact that a defined contribution plan, if prudently invested, will as a matter of course provide participating employees with greater benefits in years of inflation. In contrast, most defined benefit pension plans, particularly flat or unit benefit plans that do not take compensation into account, can only provide greater benefits to participating employees in years of high inflation if the plans are specifically amended to provide greater benefits, which in many cases is done only on an *ad hoc* basis.

Trend should continue

For several reasons, the shift from defined benefit pension plans to defined contribution plans may accelerate in the years ahead. First, it is expected that the cost of PBGC insurance for defined benefit pension plans will soon increase dramatically. The PBGC recently requested Congress to approve a 131 percent increase in the cost of the annual premium for single-employer termination insurance, increasing the annual premium from $2.60 per plan participant to a minimum of $6 per plan participant. The annual premium may have to be further increased by an additional $4 to $5 per participant if one or more large companies should declare bankruptcy.

Second, the Financial Accounting Standards Board (FASB) issued a controversial proposal in early 1983 requiring that sponsors of noncontributory defined benefit plans include net pension liabilities on their balance sheets. Pension consultants have warned that this FASB proposal may dramatically affect the apparent financial health of most large companies.

by **E. F. BOWDITCH**
Senior Vice President
The Vanguard Group of Investment Cos.
Valley Forge, Pa.

Third, and perhaps most important, new strains of defined contribution plans, particularly the 401(k) salary reduction plans, are generating tremendous excitement in the employee benefits world. A recent survey by Buck Consultants indicates that over 71 percent of a sample of major domestic corporations currently favor the establishment of 401(k) plans.

Advantages

One advantage of establishing a defined contribution plan as a participant-directed plan, under which employees are permitted to direct the investment of amounts allocated to their individual accounts, is that the employer's retirement and benefits program may be rendered more attractive and meaningful to employees, thereby bringing the sponsoring employer "bigger bang for the buck" from an employee relations standpoint. Indeed, such a plan could provide employees with as close a sense of ownership in, and control over, plan funds as may be possibly achievable in the qualified plan context.

A participant-directed defined contribution plan may be administered in the following manner:

—Employees are notified of the amount of employer contributions to the plan on their behalf, *e.g.*, "Mr. Brown, a contribution by your employer, ABC Corporation, in the amount of X dollars will be allocated to the ABC Profit-Sharing Plan account *in your name* for the 1983 plan year."

—Employees are permitted to direct the investment of all amounts credited to their individual accounts under the plan and to change their investment decisions at any time.

—Employees are regularly informed as to the current status of

their individual accounts through semiannual, quarterly, or even monthly statements showing all activities, including contributions, earnings, and distributions, occurring during the most recent period.

—Employees are permitted to borrow from their individual accounts within the limitations of ERISA and the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA).

Frequently, in a conventional defined benefit pension plan, the only information provided is a notice that the employee may be entitled at age 65 to a pension of X dollars per month. The participant-directed defined contribution plan will probably have more meaning to employees, particularly younger and middle-age employees who are not on the verge of retirement.

A second advantage peculiar to a participant-directed defined contribution plan is the possible reduction in ERISA fiduciary liability. In general, the fundamental ERISA fiduciary duties are set forth in section 404(a)(1), which requires that a fiduciary for an employee benefit plan discharge his duties solely in the interest of participants and their beneficiaries, and:

a) for the exclusive purpose of providing benefits to participants and their beneficiaries and defraying the reasonable expenses of plan administration;

b) with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims;

c) by diversifying the investments of the plan so as to minimize the risk of large losses;

d) in accordance with the documents and instruments governing the plan insofar as such documents are consistent with ERISA.

Section 404(c) of ERISA provides, however, that in the case of any defined contribution plan that permits a participant to exercise control over the assets in his individual account (as determined under regulations issued by the Department of Labor), no person who is otherwise a fiduciary to the plan will be liable for any losses resulting from the participant's exercise of such control. This provision was explained in the Conference Committee Report on ERISA as follows:

> [A] special rule is provided for individual account plans where the participant is permitted to, and in fact does, exercise independent control over the assets in his individual account. In this case, the individual is not to be regarded as a fiduciary and other persons who are fiduciaries with respect to the plan are not to be liable for any loss that results from the exercise and control by the participant or beneficiary. *Therefore, if the participant instructs the plan trustee to invest the full balance of his account in, e.g., a single stock, the trustee is not to be liable for any loss because of a failure to diversify or because the investment does not meet the prudent man standards.* (Emphasis supplied.)

On the basis of section 404(c) of ERISA, it would seem that any fiduciary for a participant-directed defined contribution plan that offers participants alternative funding vehicles will not be found liable for any losses resulting from properly following participants' investment directions, provided that the investments actually made are permitted by the plan document. It is important to recognize, however, that fiduciaries evidently will not be entitled to the protections afforded under section 404(c) of ERISA unless participating employees are provided *a wide selection of investment media* within which to direct the investment of their individual accounts. According to the Conference Committee Report:

> [T]he conferees expect that the regulations (to be issued by the Department of Labor) generally will require that for there to be independent control by participants, a broad range of investments must be available to the individual participants and beneficiaries.

Figure I **Determination Letters for ERISA Plans***

Year	Number of Defined Benefit	Number of Defined Contribution	Percentage of Defined Contribution
1976	2,595	18,891	87.9%
1977	6,953	28,463	80.4%
1978	9,728	55,956	85.2%
1979	15,755	41,122	72.3%
1980	18,849	50,493	72.8%
1981	23,789	57,748	70.8%
Total	77,669	252,673	76.5%

*Based on IRS determination letter statistics for corporate and self-employed plans since the effective date of ERISA.

Funding through mutual funds

In many cases, a family of mutual funds is a particularly appropriate vehicle through which to fund a participant-directed defined contribution plan. Indeed, most mutual fund families already provide two elements essential for the successful administration of such a plan, namely, a wide selection of alternative investment media and extensive subaccounting services.

Selection of vehicles

Most major mutual fund families offer a wide diversity of mutual funds with differing investment objectives, including:

1. one or more money market funds;
2. aggressive stock funds (seeking long-term growth of capital, with current income an incidental objective);
3. growth and income stock funds (seeking long-term growth of capital plus at least some level of current income);
4. balanced funds (seeking growth and income through investments in both stocks and bonds);
5. income funds (seeking the highest level of current income available through investments in bonds); and
6. one or more specialized funds, such as funds that invest exclusively in securities of foreign corporations.

Within such a broad range of

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Figure II Annual Rates of Return

Year	Bank Equity Funds	Insurance Equity Funds	Equity Mutual Funds
1966	−7.3%	−8.5%	−4.9%
1967	+21.2	+24.6	+32.5
1968	+10.9	+12.6	+16.6
1969	−5.7	−8.8	−13.3
1970	−2.2	−2.5	−1.7
1971	+18.1	+17.8	+18.2
1972	+15.0	+13.5	+13.5
1973	−20.1	−22.1	−19.6
1974	−24.3	−23.5	−23.9
1975	+26.9	+30.7	+32.0
1976	+18.2	+18.1	+25.4
1977	−6.2	−5.9	+1.0
1978	+6.3	+6.9	+10.8
1979	+17.8	+18.8	+27.4
1980	+29.1	+31.2	+32.8
1981	−2.7	−1.6	−0.7
1982	+22.7	+21.5	+25.3
Compounded annual rate of return	+5.7%	+5.9%	+8.5%

Source: A.S. Hansen, Inc., *Annual Hansen Investment Performance Survey*

available investments, employees may select the fund or combination of funds appropriate to their individual situation and objectives. Thus, while money market and income funds appear especially appropriate for older employees who wish to generate maximum income for retirement at a low level of risk, aggressive equity funds appear appropriate for younger employees interested in maximizing capital growth over the long term. Most mutual fund families offer free exchange privileges so that employees are permitted to change their fund selections at any time if their individual situations or objectives change.

While final regulations under section 404(c) of ERISA have not yet been issued, it would appear reasonable to maintain that funding a defined contribution plan through a mutual fund family offering the types of funds described above should provide participants with a sufficiently broad range of investments to entitle the plan's fiduciaries to the protections against fiduciary liability afforded under section 404(c) of ERISA. (Indeed, it is difficult to imagine any single funding arrangement offering a broader range of investments.) This conclusion is clearly supported by the fact that, when determining whether the investment of employee benefit plan assets in mutual funds is sufficiently diversified as a general matter, both the Conference Committee Reports on ERISA and the Department of Labor specifically recognize that resort should be made to the *ultimate investments—i.e.*, the stocks, bonds, and other income securities—comprising the mutual fund (perhaps as many as 100 or more per fund).

The broad range of investments available under a participant-directed defined contribution plan funded through a mutual fund family may be increased if non-mutual fund investment alternatives are added. For example, a popular arrangement under many participant-directed thrift plans (including section 401(k) thrift plans) is to fund the plan through a mutual fund family, common stock of the sponsoring employer, and a guaranteed investment contract or similar product offered by an insurance carrier. For this type of plan, certain mutual fund families will agree to do the subaccounting for the *entire* plan, including the portion of the plan's assets that are funded through the non-mutual fund investments.

Subaccounting services

A fundamental drawback customarily associated with participant-directed defined contribution plans is the subaccounting burden inherent in such plans. Indeed, the normal subaccounting burden under a defined contribution plan may be increased 10-fold in the case of a participant-directed plan that involves different types of employee and employer contributions and that offers participants a wide selection of alternative investment vehicles.

For example, if a conventional thrift plan is converted to a section 401(k) thrift plan, it may be necessary to establish up to six individual accounts in the name of each employee in order to record separately the different types of plan contributions. Moreover, if the plan permits employees to direct the investment of all amounts allocated to their individual accounts under the plan among 10 alternative funding vehicles, and there are no limitations on the number of investments per account, it is possible that one employee could have up to 60 separate plan investments in his name!

For many major mutual fund families, performing the necessary subaccounting under a participant-directed defined contribution plan does not present any unusual problems. Indeed, major families already perform "subaccounting" with respect to the individual fund accounts maintained by their hundreds of thousands of shareholders. Thus, when a mutual fund family agrees to perform the necessary subaccounting for a qualified plan, all that is required is the establishment of new fund accounts for the plan that, while they are all in the legal ownership of the plan trustee, will identify the type of plan contributions involved and the employee by whom or on whose behalf the contributions are being made (*e.g.*, a separate mutual fund account may be established in the name of "Trustee for ABC Corporation Profit-Sharing Plan, Voluntary Employee Contribution Account for Frank L. Brown"). Moreover, as mentioned above, certain mutual fund families will even perform the subaccounting for plan assets that are funded through non-mutual fund investments, such as the sponsoring employer's common stock or an insurance carrier's guaranteed investment contract.

Other services

Many mutual fund families will, in conjunction with performing the subaccounting for a defined contribution plan, provide employees with quarterly or monthly statements showing all activities—contributions, earnings, and distributions—occurring in their individual accounts under the plan during the

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most recent period. (Since mutual funds are required by law to price themselves every business day and mutual fund prices are regularly published in all major daily newspapers, employees can follow the progress of their accounts' earnings on a daily basis.) In addition, a few fund complexes have established wholly owned trust companies that may be qualified to serve as trustee for an employer's qualified plan in accordance with conditions prescribed by the Department of Labor.

Investment performance

Finally, mention should be made briefly of the most important consideration in any employer's decision to fund a participant-directed defined contribution plan (or any other qualified employee benefit plan) through a mutual fund family: investment performance. A number of studies have been conducted on the relative investment performance of mutual funds and other pension fund advisors, including banks, trust departments, and insurance companies. The weight of evidence indicates that mutual funds have provided investment results superior to those achieved by other types of institutional investors. This point is illustrated in Figure II, which shows annual rates of return for equity mutual funds, as compared to bank and insurance equity funds, since 1965. In 14 out of the 17 years, the median return of equity mutual funds outpaced the banks' and insurance companies' performance results. As a result, over the 17-year period the median mutual fund provided a compounded annual rate of return of 8.5 percent, versus 5.7 percent for banks, and 5.9 percent for insurance companies.

Conclusion

Clearly then, mutual fund families (and particularly commission-free "no-load" complexes) should have an important role to play in the growing participant-directed defined contribution plan market. They offer the plan sponsor a wide selection of investment vehicles, administrative expertise in defined contribution plan subaccounting and related services, and demonstrably good investment performance. □

International Pension World

(Continued from page 8)

What is the future of provident associations? BUPA, for the first time in years, is expected to report virtually unchanged membership with a strong growth in new clients being more or less offset by a loss of business to competitors. BUPA had a fairly uncomfortable 1982, with an underwriting loss of £1.9 million. However, it should be back into an underwriting profit this year.

PPP reports a growth in excess of 11 percent, while WPA has shown a useful growth. It appears that the boom years of 1980 and 1981 are over, and growth rates are looking more realistic. Nevertheless, the hospital building program continues unabated, and an oversupply can only result in lower charges.

The outside competition should keep the associations on their toes, though they do not have the financial strength for a prolonged rate-cutting war. □

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JULY 1983

Pension World

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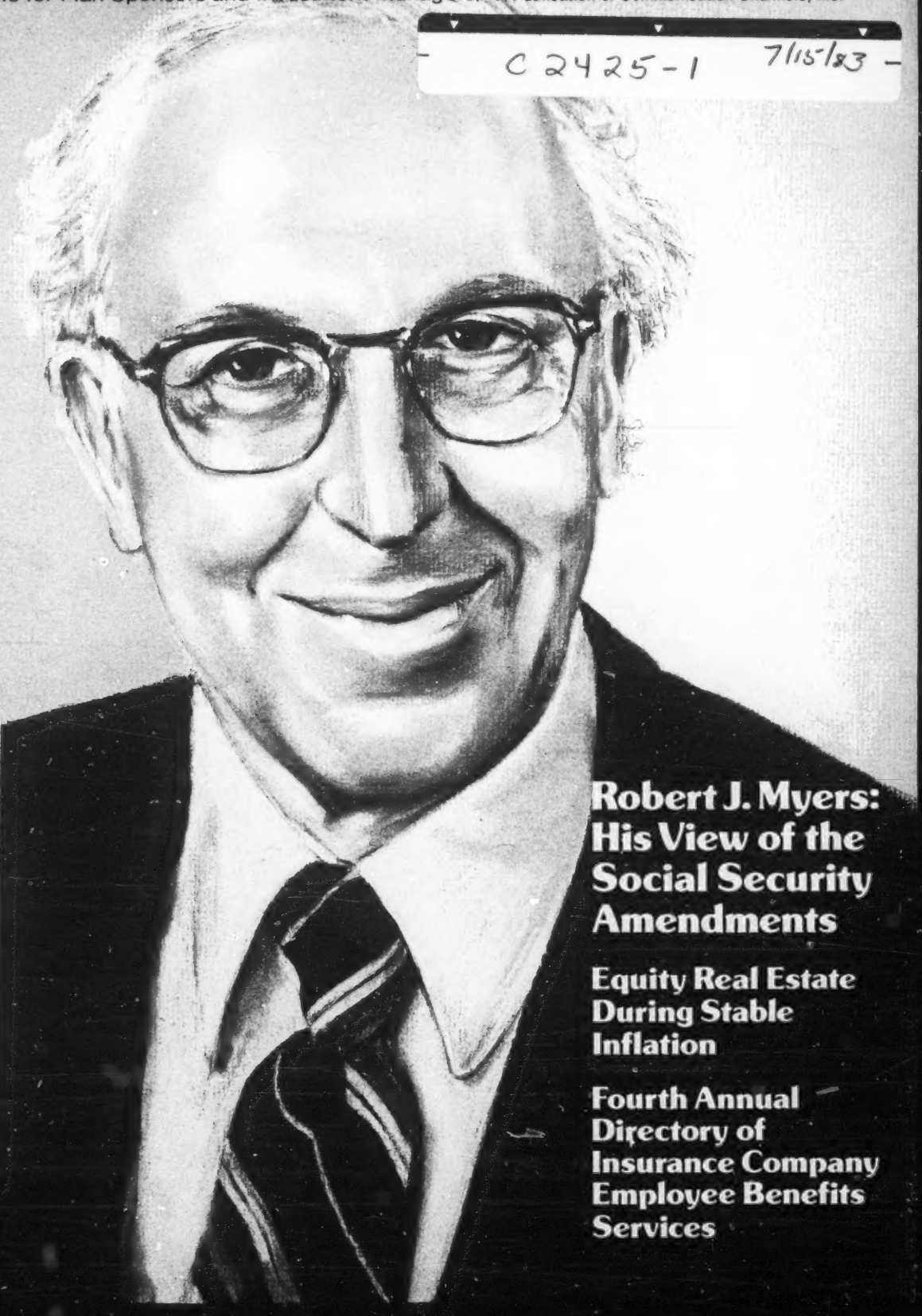

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Robert J. Myers: His View of the Social Security Amendments

Equity Real Estate During Stable Inflation

Fourth Annual Directory of Insurance Company Employee Benefits Services

Pension World

The Magazine for Plan Sponsors and Investment Managers/A Publication of Communication Channels, Inc.

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The former executive director of the National Commission on Social Security Reform talks candidly about the work of the Commission, the new amendments, and the role of employers in implementing the changes.

Investment Manager Profile: Penmark: Turning market inefficiencies into profits by Ronald Derven **21**
Key executives of this Chicago-based money manager reveal the firm's strategy for capitalizing on opportunities in running its $260 million in assets.

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Investment Management: Trends in portfolio diversification of assets by Thomas E. Keating **36**
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Fiduciary Responsibility: Pension trust investment in mortgages by William J. Chadwick **39**
The fiduciary responsibility and prohibited transaction provisions of ERISA are still inhibiting the movement of pension assets into mortgages, for reasons this attorney outlines.

Fourth Annual Directory of Insurance Company Employee Benefits Services **45**
Pension World's 1983 directory lists the types of plan designs, insurance services, actuarial and legal services, and investment packages offered by more than 100 firms.

Pension World Basics: Effective use of welfare benefit dollars by Herbert V. Kaighan **65**
Part I of a three-part series on getting the most from the welfare benefit dollar covers plan design—the key to cost, cost control, and benefit effectiveness.

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Cover: **With more than 35 years of experience in Social Security matters, Robert Myers is eminently qualified to report on the background and probable impact of the 1983 amendments. His assessment begins on page 15.**

VBPA

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U.K. pension fund investments

U.K. funds have made progress, but they may face problems.

Even though the British economy shows no real sign of recovery, these are prosperous days for Britain's private pension plans.

Due to the buoyant stock market over the past year, assets probably now total well over £80 billion. The accompanying chart shows the pension fund assets for 1979-82. The inflow of new cash into British pension funds is running at more than £6 billion a year.

Market Value of Pension Fund Assets (£bn)

	1979	1980	1981	1982
Private sector	23.6	31.5	36.4	48.0*
Local authority	5.0*	7.5*	8.0*	10.8*
Other public sector	12.3	15.7	18.7	24.1*
	40.9	54.7	63.1	82.9*

*Estimate

Investment returns

The returns on pension fund investments in 1982 were extremely high. The total return on long-dated gilt edge security—capital appreciation plus interest—was more than 50 percent. The return on U.K. equities, as measured by the FT actuaries All Share Index, was 29 percent.

The weakness of sterling in 1982 also played an important part in the return on overseas equities; it is estimated that the overseas investments returned something in the vicinity of 30 percent, on average. These extremely good returns were made at a time when U.K. inflation has been noticeably reduced. The retail price inflation in 1981 was 12 percent, and the latest figures show inflation is running at under 5 percent.

One black spot in the pension investment area in 1982 was property investments. It has been estimated that pension fund property investments had a return of some 5 percent.

On the whole, however, 1982 was an excellent year for U.K. pension fund investments. Increases in real returns assisted many pension plans in increasing pension payments to pensioners. A number of plans either partially or fully increased such payments in line with the retail price inflation.

Economic woes

One should not put aside another reason for financial prosperity in U.K. pension funds, which is the fact that due to the recession there has been a large increase in unemployment. As one can expect, a large exodus of plan members can provide a significant boost to the pension funds' actuarial solvency.

Having looked at a buoyant 1982, one should also consider that the past 10 years' history of pension fund investments in the United Kingdom has been nowhere near the 1982 performance. It is generally agreed that over the past 10 years there has been a negative real return overall.

Having said that, using 1972 as a base year is considered by many as, perhaps, unfair. Going back to 1962 and looking at a 20-year picture, the real returns have been estimated at 1 percent. It should be remembered that these figures are based on averages; some plans may have fared better, and some, of course, have fared a little worse.

Political pressures

One other feature of U.K. pension fund investments during the past couple of years has been a rush to invest overseas. Exchange controls were eliminated in late 1979, and some funds now aim to have as much as 20 percent invested overseas. This could create a sticking point, especially with the strong unions in the United Kingdom. The Trade Union Congress (TUC) has proposed a national investment bank financed by resources of the pension funds to build up the British economy rather than investing outside the United Kingdom.

In an investment sense, pension funds have made good progress in the past few years, but their real problems in the future may be more of a political nature. □

by **VINCENT J. SIMONE**
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Pan Am Navigates $1.2 Billion Pension Fund

County Multi-Tier Retirement Plans

Foreign Pension Investment In U.S. Real Estate

Tenth Annual Survey Of State Retirement Systems

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Pension World

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Plan Sponsor Focus: Navigating Pan Am's $1.2 billion pension fund by Ronald Derven — 16
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Public Employee Plans: Profile of state employee health plans in 1983 by John Mackin — 20
Health insurance plans covering state government employees continue to assume more of the premium costs and offer broader benefits than they did during the 1970's. However, the trend appears to have slowed, according to this report by a senior vice president at Martin E. Segal.

Real Estate Highlight: Foreign pension investment in U.S. real estate by Christopher D. Budden — 25
Foreign pension funds began to invest actively in U.S. mortgages in the 1970's. Now, an ever-growing group of foreign funds is moving heavily into equity real estate, says a partner of Richard Ellis.

Public Employee Plans: County multi-tier retirement plans by Robert D. Drisko — 30
Though multi-tier retirement programs have been in place for California county employees since 1937, today, with higher operating costs statewide and as a result of budget constraints, most of the counties covered under the system are casting their eyes to lower tiers.

Current Issues in Plan Design: Deducting plan contributions: a new problem in business sales? by Judith F. Mazo — 36
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Pension World Basics: Effective use of welfare benefit dollars by Herbert V. Kaighan — 48
Part II of a three-part series on getting the most from the welfare benefit dollar covers funding — insured vs. noninsured benefits, experience rated vs. pooled, and other fundamental considerations.

10th Annual Survey of State Retirement Systems — 53
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Cover: **The Pan American World Airways logo is a familiar sight in airports around the globe. How Pan Am tracks its pension assets and plans begins on page 16.**

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International Pension World

Survey of private pension plans in the United Kingdom

The National Association of Pension Funds (NAPF), the largest professional association of pension fund managers in the United Kingdom, recently released the results of its eighth annual survey of occupational pension plans.

The 1982 survey analyzed the replies of 97 pension plans in the public sector and 1,095 pension plans in the private sector. The companies operating these pension plans had an estimated 8.5 million employees of whom 5.5 million (64.7 percent) were currently members of pension plans. In addition, there were 3.5 million pensioners and 879,000 deferred pensioners.

The government actuary's 1979 survey estimates that there are some 90,000 occupational pension plans in the United Kingdom with a total membership of about 11.8 million employees and 3.7 million pensioners. However, 79,000 of these plans had less than 30 members. Hence, while covering a relatively small proportion of the number of pension plans in the United Kingdom, the association survey includes about half the total members of occupational pension plans.

Table I compares the main financial statistics of the pension plans participating in the 1982 survey with those in 1980 and 1981. Following is a summary of the pertinent facts covered in the 1982 NAPF survey.

Table I Comparison of Pension Plans

	1982 £m	1981 £m	1980 £m
1. Estimated Market Value of Funds (excluding Insured Schemes)	59,250	46,633	36,860
2. Estimated Annual Contribution Income	6,702	5,811	4,890
3. Estimated Annual Pension Outlay	2,394	1,943	1,752
4. Estimated Lump Sum Commutation Payments (and lump sums on retirement as of right)	1,682	897	517
5. Estimated Lump Sum Death Benefits	617	302	202

Nature of the pension plans

Plans covered by the survey. The 1982 survey covered a total of 1,192 pension plans (97 of which were in the public sector). Forty percent of these plans were Staff plans, 14 percent Works plans, and 46 percent Combined plans.

Membership. The survey covered companies with some 8.5 million employees of whom 5.5 million were members of plans. The total number of pensioners receiving pension benefits from the plans included in the survey was estimated to be 3.5 million. The plans also had 879,000 ex-employees with entitlement to deferred (preserved) pensions.

Investment medium. Sixty-nine percent of the plans were privately invested, 13 percent insured, and 17 percent insurance-managed fund units. Only 1 percent of the plans were unfunded.

Additional plans. Thirty-four percent of the companies had a topping-up or separate plans, and 13 percent provided a different benefit scale for their senior staff.

Conditions of entry. Eighty-four percent of the plans made membership compulsory. Sixty-three percent imposed a minimum eligibility age of 21 or under and 22 percent required a higher minimum age, while 62 percent imposed some maximum eligibility age. A minimum period of service was required by 45 percent of all plans.

Members' contributions. Ninety percent of the plans were contributory. Only 4 percent of contributory plans (all Works plans) levied members' contributions as a flat rate per annum.

Fifty-one percent of plans calculated contributions on basic earnings. The average contribution rate per member where contributions depend on salary was found to be approximately 4.5 percent of pensionable earnings for Staff plans, 3.5 percent of pensionable earnings for Works plans, and 4.4 percent for Combined plans.

Company contributions—contributory plans. The average company contribution rate per member was approximately 12.9 percent of pensionable earnings for Staff plans, approximately 7.33 percent of pensionable earnings for Works plans, and approximately 10.65 percent of pensionable earnings for Combined plans.

Company contributions—noncontributory plans. The average company contribution rate for pensionable earnings per member was

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approximately 17.45 percent for Staff plans, 7.21 percent for Works plans, and 17.44 percent for Combined plans.

Benefits provided

Normal retirement age. The majority of plans adhered to normal retirement age (under social security) of 65 for males and 60 for females.

Normal retirement benefit. Seventy-five percent of contracted-out schemes gave an accrual rate equivalent to $^1/_{60}$ or better, while only 32 percent of contracted-in schemes did so.

Final and final average salary. Ninety-seven percent of the defined benefit plans were final pay or final average salary, the most frequent definition of final average salary (32 percent) being the best three consecutive years of the final 10 years.

Integration with social security. Fifty-three percent of the plans were integrated with social security. Twenty-four percent of plans made a specific adjustment of the amount of pensionable pay on which contributions are paid, 18 percent of plans made a specific adjustment by offsetting the state pension against the occupational pension, 8 percent by a combination of the two, and 3 percent by another method.

Early retirement (ill health). Ninety-eight percent of all plans provided an immediate pension for a member's retirement on the grounds of ill health.

Death-in-service benefits. Virtually all the plans surveyed provided at least a widow's pension or lump sum on death-in-service. Ninety-one percent of plans paid a lump sum as well as a widow's pension.

The most common level of widow's pension was equal to one-half the member's pension. The most common level of lump sum benefit was between two and 2½ times salary for both males (married and single) and females.

Fifty-three percent of plans provided an automatic widower's benefit if he was a dependent, while 31 percent of plans provided a benefit whether he was a dependent or not.

Seventy-two percent of plans provided children's benefits.

Death-in-retirement benefits. Ninety-seven percent of the plans gave death-in-retirement widow's pensions as a right. Eighty-six percent of those plans gave a death-in-retirement pension of one-half the member's pension. Fifty-four percent of the plans (covering 77 percent of members) gave death-in-retirement pensions for dependent widowers, while 34 percent of the plans (covering 38 percent of members) provided the benefit for an independent widower.

Pension guarantee. Eighty-four percent of plans provided a pension guarantee. The most common guarantee was five years.

Early retirement (other than ill health). Ninety-six percent of plans had a provision for employees to retire voluntarily, while only 83 percent of plans had a provision for employees to be retired early at the instigation of the employer. Sixteen percent of plans made additional discretionary payments where retirement was at the instigation of the employer.

Commutation options. Ninety-seven percent of plans provided members with the option to commute part of their pension for a lump sum at retirement, while 89 percent of plans had the facility to commute trivial pensions entirely.

Escalation of pensions. Forty percent of plans guaranteed to increase pensions in payment and another 52 percent of plans gave non-guaranteed increases of pensions in payment. The most common rate of guaranteed escalation was between 3 and 4 percent per annum.

During the last three years, almost half of those plans that guarantee to increase pensions in payment have actually increased pensions in excess of the guaranteed level. In the public sector, 72 percent of plans gave guaranteed increases that matched the Retail Price Index (RPI), while in the private sector only 2 percent of plans did so. Thirty percent of plans escalated pensions in deferment.

Interchange arrangements. Ninety-seven percent of plans are able to transfer pension rights to another employer's plan, while 95 percent of plans are able to receive transfer payments.

Additional voluntary contributions (AVC's). Eighty-three percent of plans allowed members to make additional voluntary contributions (AVC's).

Social Security Pensions Act

The decision to contract-out or to participate in the state plan. Seventy-seven percent of plans, representing 93 percent of the total membership of all plans in the survey, have elected to contract-out of the state plan, as permitted by the 1975 Act.

Treatment of early leavers. Sixty-four percent of plans have chosen the fixed revaluation of GMP's. The analysis shows that 73 percent of public sector plans have chosen full revaluation, while only 5 percent of private sector plans have done so.

Copies of the complete 66-page survey are available from the NAPF, Sunley House, Bedford Park, Croydon, CRO OXF, England. □

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Profile of state employee health plans in 1983

Health insurance plans covering employees of state governments continue to assume more of the premium costs and offer broader benefits than they did during the 1970's. As of January, 1983, however, this trend appears to have slowed, presumably because of steady inflation, heavy pressure on state budgets, and a strong new emphasis on health care cost containment.

These conclusions are drawn from Martin E. Segal Company's fourth survey of state employee health insurance plans, which collected data for plans in effect at the beginning of 1983.

The 1983 study analyzed 71 separate health insurance plans sponsored by the 50 states, covering some 3.5 million employees. The number of plans now available has been considerably augmented by Health Maintenance Organizations offered as an option by various states to their employees. These are addressed separately in this report and are not covered in the summary findings or table except where indicated.

With respect to conventional plans, a perceptible trend towards adopting a single, uniform plan for all employees continues. Today, 36 states provide one uniform plan, as compared to 31 states in 1980, 29 in 1976, and 23 in 1973.

An interesting new trend, no doubt influenced by Equal Employment Opportunity Commission regulations, is the introduction of companion plans for employees who are over 65. Some six states reported offering such plans for older employees.

Employee contributions

In private industry, despite a new emphasis on requiring employees to contribute to their own health care coverage, it is still fairly common for the employer to pay fully for both employee and dependents. By contrast, the state plans remain largely contributory. However, three-fifths of the states now pay 100 percent of the employee's own coverage for at least one basic option, compared to 23 in each of the three previous surveys. In addition, two other states today pay over 95 percent of the employee's coverage under at least one plan.

Over the years, the states have slowly inched away from the contributory concept. Today, 10 states pay the full cost of coverage under at least one plan for both employee and dependents, compared to only two states 10 years ago.

State approach to contributions

Two general approaches to contributing toward employee health insurance coverage prevail among the states. One group contributes a set amount toward covering the employees and a greater amount to help cover dependents. For example, a state might pay $40 monthly for the employee alone and $75 for employee and dependents.

The other group simply contributes the same amount whether the employee has dependents or not. For example, the state pays $75 monthly per employee regardless of family situation. In 1973, the single amount formula predominated (26 states). But today, only 18 states use it (three of them with respect to one plan only).

The percentage of the premium that states pay for *employee and family coverage* under contributory plans keeps increasing, but slowly. Here is the trend with respect to basic options only:

% State Pays	Number of States 1980	1983
100%	10	10
90-99	4	6
75-89	4	6
50-74	17	18
33-49	13	8
0-32	2	2

State contributions

The dramatic inflation during the 1970's that affected all aspects of health care was accompanied by a surge in the states' premium costs. However, at least a portion of such increases was attributable to benefit improvements.

An earlier trend that saw the states assume a greater percentage of the *total monthly premium* appears to be losing momentum. Eighteen states did increase their percentage of contribution between 1980 and 1983, but only six did so on behalf of both the employee and family, and in most cases the increase was marginal. The other states increased the percentage of coverage for the family or individual only.

Perhaps more significantly, during the same period three states *decreased* their percentage of total premium for both the employee and family, while seven lowered it for the individual or family only. Another half dozen or so states raised their percentage of contribution for certain options but lowered them for others.

In summary, there appears to be a more conservative approach among the states toward assuming a greater share of premium costs.

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Maximum outlays

As recently as 1973, 11 states paid a maximum of $10 monthly to cover employees and their dependents. Some 22 states now pay a maximum that exceeds $100, compared to six states in 1980. Of the 22, seven pay in excess of $150, and three pay over $200 a month for at least one plan (Alaska, Michigan, and Oregon).

Between 1980 and 1983, only one state managed to avoid raising its maximum costs, and one other state actually cut them.

In the aggregate, the states today contribute from 50 to 100 percent of the premium costs for the employee's coverage (it was 44 to 100 percent in 1980). For employee and family coverage the states today pay from 26 to 100 percent of the total cost.

Cost containment

Many states appear to be making pronounced efforts to keep health care costs in check. Indeed, six states (Florida, Illinois, Michigan, New York, Oregon, and Wisconsin) are each using 10 or more cost containment devices, while most of the others are using a half dozen techniques each.

Their procedures range from writing co-insurance and deductible provisions into state plans (this is almost universal), to sponsoring health education programs (12 states) and physical exams and/or health screenings (nine states). Some 35 states provide for ambulatory surgery programs, 25 have some home care provisions written into their plans, 29 provide for convalescence in a nursing home, four sponsor in-hospital review programs, and four provide for regular audits of hospital bills.

A few states have experimented with less commonly used cost containment procedures. Michigan, for example, provides coverage for home birth, and New York covers the services of a birthing center. Seven states provide hospice care for the terminally ill.

Hospital benefits

One of the basic forms of health coverage, the full service hospital benefit, is offered by most states through a variety of programs. Today, this is still the most usual form of hospital benefit provided by the states, as it has been since 1973. The most evident trend in this area is a tendency to drop indemnity features. Where they are employed, the dollars reimbursed have been increased, ranging in 1983 from $60 to $125. The number of covered days has also increased, today ranging generally from 120 to 400. However, the average hospital stay is approximately six days.

Surgical and medical benefits

In 1973, about two-thirds of the states offered their employees coverage for all or most surgical fees. Included were full service surgical coverage, coverage under a major medical plan, or coverage under reimbursement schedules with maximums upward of $600 (which then covered a substantial portion of average charges).

By 1980, surgical benefits had improved, with the most notable trend a move from fixed payments to full service. By 1983, 21 plans were of the comprehensive type, 21 offered full service coverage, 18 plans employed a surgical schedule, and 11 had a surgical co-insurance feature.

A few states adopted surgical schedules for one or more plans where they had formerly offered full service surgical benefits.

In line with a general trend toward improved benefits among state health insurance plans, the required deductibles decreased from an average of $93 in 1973 to $85 in 1980. By 1983, however, the average deductible had *risen by 58 percent* to $134—either as part of a cost containment effort, or in response to inflationary pressures, or in a combination of both.

Here is how the situation with respect to deductibles has changed over the years:

Amount of Deductible	Number of States		
	1976	1980	1983
$100+	NA	NA	11
100	30	31	27
80	1	0	0
75	0	1	2
50	10	10	6
Under 50	2	1	1

One state varied the deductible in both 1976 and 1980, and one state had no deductible in 1980.

Co-insurance and maximums

The traditional 80 percent co-insurance requirement found in most major medical and comprehensive plans from 1973 through 1980 remained the prevailing favorite in 1983; it was used by 38 states in at least one plan (down from 44 in 1980). Maryland, which had raised its co-insurance level from 80 percent to 100 percent on its primary plan between 1973 and 1976, still had the most generous formula.

Maximum coverage under major medical policies has steadily increased. In 1983, 12 plans among the 71 surveyed place no maximum upon benefits, compared to eight plans among the 77 surveyed in 1980.

In both 1973 and 1976 the $50,000 maximum predominated (15 plans each year) while many plans had maximums that were substantially lower. Today, no plan has a maximum of under $50,000. The $250,000 maximum is now the favorite choice (25 plans), but seven plans have a maximum of $500,000, and 10 have set it at $1 million.

Dental benefits

Coverage for dental care has expanded. In 1973, only New York's employees enjoyed dental coverage, while Hawaii covered dental care for the children of employees. By 1983, 23 states offered dental coverge on some basis. However, there is no uniformity among the plans with respect to benefits or extent of coverage. Comprehensive dental coverage is offered by several states. Other states offer partial coverage under various options.

Alaska, which offers a comprehensive plan, employed a step-rate formula in 1980 that is still in use. It provides 70 percent coverage in the first year, 80 percent in the second, 90 percent in the third, and 100 percent in the fourth.

New Jersey offers a dental option (with a $25 deductible) to which both state and employee contribute. It provides orthodontia for dependents under 19, up to a lifetime maximum of $700.

HMO's

The Health Maintenance Organization (HMO), which is employed with increasing frequency in the private sector as a cost containment vehicle, enjoys equally widespread acceptance among the states. The current survey reveals that no less than 32 states offer at least one HMO option; 25 states offer at least two, and six offer 10 or more

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CONTRIBUTIONS TO STATE EMPLOYEE HEALTH PLANS: JANUARY 1, 1983

(Excludes HMOs and Family Alternates)

	FOR EMPLOYEE ONLY				FOR EMPLOYEE AND FAMILY			
	Cost to Employee	Cost to State	Total Cost	% of Total Paid by State	Cost to Employee	Cost to State	Total Cost	% of Total Paid by State
Alabama	—0—	$ 75.00	$ 75.00	100	$65.00	$ 75.00	$140.00	54
Alaska								
Confidential Unit Employees	—0—	205.08	205.08	100	—0—	205.08	205.08	100
General Employees	—0—	193.64	193.64	100	—0—	193.64	193.64	100
Public Employees Local 71	—0—	165.70	165.70	100	—0—	165.70	165.70	100
Arizona								
Equitable	1.00	55.56	56.56	98	50.90	104.74	155.64	67
Blue Cross/Blue Shield	1.00	40.66	41.66	98	2.62	104.74	107.36	98
Arkansas[1]								
Plan I	17.38	41.00	58.38	70	62.32	41.00	103.32	40
Plan II	9.26	41.00	50.26	82	33.06	41.00	74.06	55
California								
Service Plan	24.06	71.00	95.06	75	50.58	168.00	218.58	77
Indemnity Plan	1.38	71.00	72.38	98	20.08	168.00	188.08	89
Colorado	22.18	42.12	64.30	66	117.81	42.12	159.93	26
Connecticut	—0—	66.88	66.88	100	41.22	93.68	134.90	69
Delaware								
Basic	—0—	56.08	56.08	100	—0—	137.92	137.92	100
Comprehensive	14.46	56.08	70.54	80	34.76	137.92	172.68	78
Special	1.26	56.08	57.34	98	3.78	137.92	141.90	97
Florida	13.28	39.88	53.16	75	48.46	75.06	123.52	61
Georgia	10.00	51.10	61.10	84	30.00	93.90	123.90	76
Hawaii								
HMSA — Regular	15.98	15.98	31.96	50	49.14	49.14	98.28	50
HMSA — Supplemental	—0—	13.80	13.80	100	—0—	42.12	42.12	100
Idaho[2]	—0—	73.10	73.10	100	66.74	73.10	139.84	52
Illinois								
High	—0—	67.10	67.10	100	134.20	74.10	208.30	36
Low (dependent option)	NOT APPLICABLE				79.44	74.10	153.54	48
Indiana	1.58	54.64	56.22	97	36.66	129.63	166.27	78
Iowa								
Program I	15.64	66.00	81.64	81	130.02	66.00	196.02	34
Program II	—0—	54.32	54.32	100	59.12	66.00	125.12	53
Program III	—0—	53.26	53.26	100	35.58	66.00	101.58	65
Kansas	—0—	66.70	66.70	100	112.64	66.70	179.34	37
Kentucky	—0—	46.10	46.10	100	69.26	46.10	115.36	40
Louisiana	26.92	26.92	53.84	50	63.04	63.04	126.08	50
Maine	—0—	47.22	47.22	100	34.62	85.08	119.70	71
Maryland								
Plan I	5.68	51.10	56.78	90	16.20	145.84	162.04	90
Plan II	6.12	55.16	61.28	90	17.86	160.80	178.66	90
Massachusetts[3]	11.38	67.39	78.77	86	23.82	141.40	165.22	86
With life insurance coverage	11.56	69.03	80.59	86	24.00	143.04	167.04	86
Michigan	8.45	76.01	84.46	90	23.66	212.90	236.58	90
Minnesota	—0—	61.20	61.20	100	7.74	130.84	138.58	94
Mississippi	—0—	28.80	28.80	100	45.18	28.80	73.98	38
Missouri	—0—	54.00	54.00	100	78.00	54.00	132.00	41
Montana	—0—	69.83	69.83	100	46.76	80.00	126.76	63
Nebraska								
Low option	—0—	29.82	29.82	100	—0—	106.75	106.75	100
Intermediate option	4.66	29.82	34.48	86	16.69	106.75	123.44	86
High option	10.97	29.82	40.79	73	39.29	106.75	146.04	73
Nevada	—0—	86.25	86.25	100	81.15	86.25	167.40	51
New Hampshire	—0—	58.67	58.67	100	—0—	158.41	158.41	100
New Jersey[5]	—0—	41.53	41.53	100	—0—	102.46	102.46	100
New Mexico[4]								
Under 65	19.84	27.73	49.57	60	50.61	75.92	126.53	60
Actives: 65 and over	15.60	23.36	38.96	60	28.90	43.33	72.23	60
New York								
Statewide I	5.92	53.24	59.16	90	27.00	116.49	143.49	81
Statewide II	5.01	45.13	50.14	90	22.66	98.09	120.75	81
Statewide III	5.01	54.15	59.16	92	22.64	120.85	143.49	84
GHI I	—0—	44.43	44.43	100	5.22	116.49	121.71	96
GHI II	—0—	39.00	39.00	100	9.96	98.09	108.05	91
GHI III	—0—	44.43	44.43	100	.86	120.85	121.71	99
North Carolina	—0—	47.80	47.80	100	76.98	47.80	124.78	38
North Dakota								
Regular	—0—	42.68	42.68	100	27.87	107.07	134.94	79
Ohio[7]								
Under 65	21.99	59.45	81.44	73	51.94	140.92	192.36	73
Actives: 65 and over	7.94	21.46	29.40	73	25.14	67.96	93.10	73
Oklahoma	—0—	78.51	78.51	100	80.00	78.51	158.51	50
Oregon								
BC Plan II	—0—	48.28	48.28	100	—0—	113.55	113.55	100
BC Plan III	—0—	75.95	75.95	100	—0—	220.06	220.06	100
CNA I	—0—	97.12	97.12	100	11.78	97.12	108.90	89
CNA II	—0—	97.12	97.12	100	—0—	97.12	97.12	100
Pennsylvania								
Harrisburg	—0—	43.08	43.08	100	—0—	104.67	104.67	100
Lehigh Valley	—0—	40.26	40.26	100	—0—	108.44	108.44	100
Philadelphia	—0—	54.95	54.95	100	—0—	148.74	148.74	100
Pittsburgh	—0—	55.83	55.83	100	—0—	148.19	148.19	100
Wilkes-Barre	—0—	54.03	54.03	100	—0—	135.73	135.73	100
Rhode Island	—0—	42.25	42.25	100	—0—	118.44	118.44	100
South Carolina								
Plan "A"	—0—	45.28	45.28	100	57.12	45.28	102.40	44
Plan "B"	6.55	45.28	51.83	87	67.37	45.28	112.65	40
South Dakota	—0—	43.98	43.98	100	96.08	43.98	140.06	31
Tennessee	14.00	21.00	35.00	60	39.00	58.50	97.50	60
Texas[10]								
Plan I	15.68	60.00	75.68	79	142.85	60.00	202.85	30
Plan II	—0—	47.60	47.60	100	57.05	60.00	117.05	51
Plan IV	—0—	42.84	42.84	100	48.41	60.00	108.41	55
Utah	5.62	22.50	28.12	80	14.85	59.43	74.28	80
Vermont	10.88	32.66	43.54	75	30.21	90.63	120.84	75
Virginia	—0—	67.80	67.80	100	50.00	122.64	172.64	71
Virgin Islands[10]	6.24	18.71	24.94	75	26.02	18.71	44.73	42
Washington	—0—	111.30	111.30	100	—0—	111.30	111.30	100
West Virginia								
Without life insurance	18.27	47.63	78.00	100	44.70	104.30	178.00	100
Wisconsin	7.29	65.57	72.86	90	18.01	162.03	180.04	90
Wyoming	11.88	70.00	81.88	85	93.40	70.00	163.40	42

(1) Includes $5,000 life insurance coverage at $2.80/month.
(2) State pays additional 1.15% for life, AD&D and disability insurance.
(3) Includes cost of catastrophic illness option (elected by 90% of participants).
(4) Based on predominant bargaining unit rate of $69.94 for dependents. Others, at rate of $77.38, excluded.
(5) Does not reflect cost of drug program (paid in full by state).
(6) Includes $5,000 basic life, AD&D and weekly indemnity insurance.
(7) State also pays 100% for dental and vision.
(8) State does not contribute for non-management employees.
(9) Each plan includes $1.23 for life and AD&D insurance. Family Alternate (Plan III) omitted.
(10) Data relating to the Virgin Islands is included in the tables but not in the text of this summary.

NOTE: A COMPLIMENTARY, DETAILED REPORT OF MAJOR PROVISIONS OF PLANS, AVAILABLE IN A SEPARATE BOOKLET, MAY BE OBTAINED BY WRITING TO: JACK J. FRIEDMAN, DIRECTOR OF INFORMATION SERVICES, MARTIN E. SEGAL COMPANY, 730 FIFTH AVENUE, NEW YORK, NEW YORK 10019

HMO's. Collectively, the states offer employees a choice from among 179 HMO's. In 12 states, 15 percent or more of the employees were enrolled in an HMO. In three of the 12 states, approximately 40 percent of the employees were covered.

For survey purposes, the states were asked to describe the characteristics of only major HMO's, and Segal Company analysts limited their scrutiny to a maximum of five HMO's per state. That sample revealed that only 42 percent of the HMO's charged more than the state plan for active employee coverage, while 59 percent charged more for family coverage. Where the HMO option was available to retirees, 43 percent of the plans charged more than the conventional state plan for the individual, and 53 percent charged more for covering the retiree's family.

In many cases, HMO's have gone beyond the conventional and offer more than standard service. Some examples include treatment for alcohol and drug addiction, mental health visits, the services of a podiatrist, optional dental care, basic vision care, and glasses.

Retiree benefits

In 1983, the survey for the first time included questions regarding coverage that the states directly provide or otherwise make available to retirees.

Of the 50 states, all but four offer their retirees access to some form of health care coverage.

The meaning of "extending access" varies, of course, from state to state. In 16 states, the retiree may elect to continue coverage under one or more options but must pay the full cost of such coverage while the state pays nothing. Thirteen states offering retirees access to health care coverage pay 100 percent of the cost of at least one option, and 14 states pay less than 100 percent of the cost of retiree-only coverage. Three states pay 100 percent under certain circumstances.

In all but five states where retirees pay either all or part of the premium, the state will deduct the premium cost from the retiree's pension check.

Conclusion

Despite inflationary pressures and careful scrutiny of spending at all levels of government, state expenditures on employee health plans continue to increase. The pace of benefit improvement has slowed, but despite that, state employees appear to have achieved parity of benefits with their counterparts in private industry.

Budgetary pressures, cost-shifting practices, and medical care inflation will challenge the states to keep providing adequate and affordable health care coverage.

Many states have made a broad, new commitment to soaring medical care costs. Some are implementing or expanding traditional types of cost containment programs while others have introduced nonconventional techniques. The latter range from coverage for home births and the services of a midwife to mandatory ambulatory surgery for enumerated procedures.

There is little doubt that cost containment will remain an important consideration for state employee health plans. In addition, over the next few years states are likely to see greater pressure from retirees to pay for all or part of their health insurance coverage. Some states will probably start programs to begin funding retirees' health care benefits during employees' working years.

The states may also give further attention to processing their own health care claims. Today, only two states are self-administered, while the rest rely on Blue Cross/Blue Shield, other carriers, or third-party administrators to administer claims. Given the size of their employee populations, the states may also give greater attention to self-insurance. Only 16 states are wholly or partly self-insured today.

A combination of budgetary pressures, Federal cost-shifting practices, medical care inflation, and mounting health care expectations among active and retired state employees will challenge the states to keep providing adequate and affordable health care coverage. □

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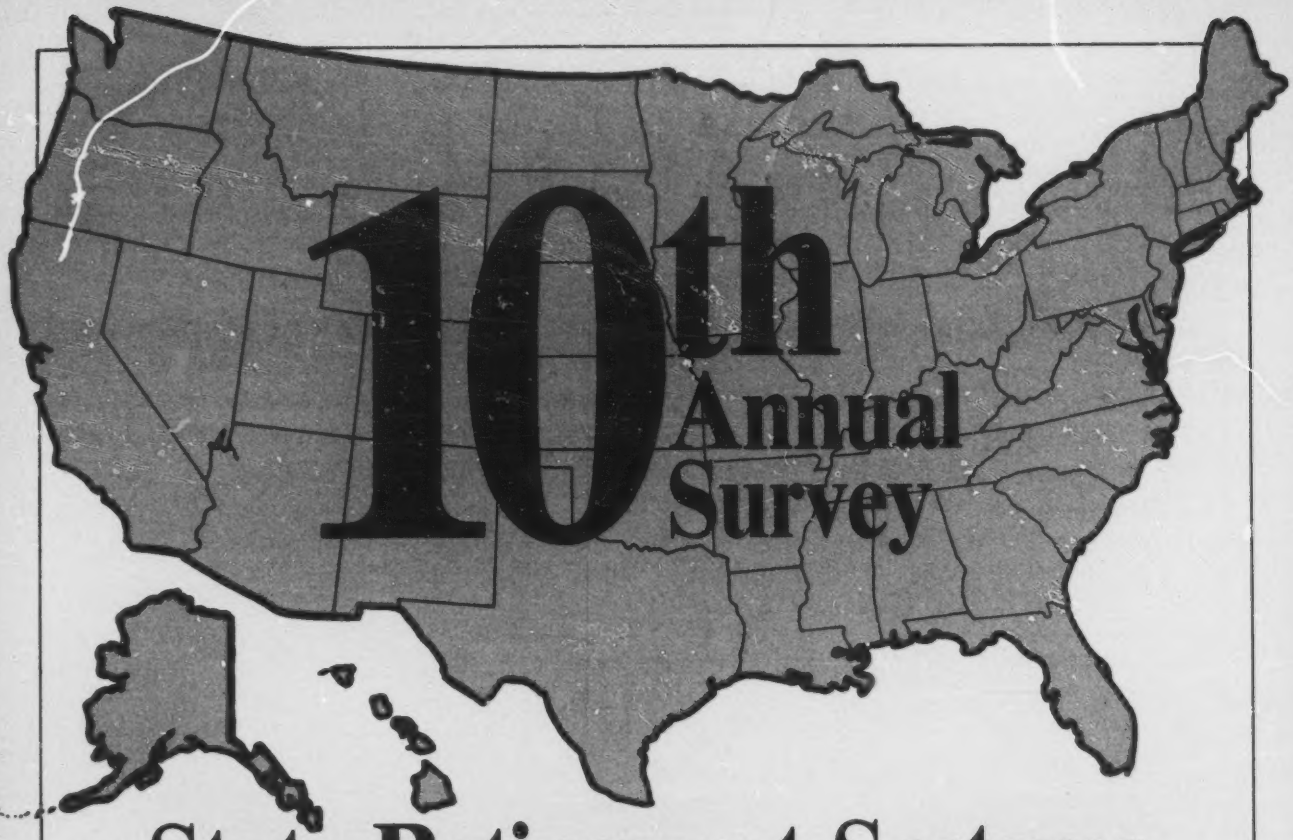

10th Annual Survey

State Retirement Systems

■ Fifty states and the District of Columbia are included in *Pension World*'s 1983 Investment Survey of State Retirement Systems, with a total of 97 public retirement systems reporting. The investment data that follow were compiled from responses to *Pension World*'s questionnaire, which was mailed during April, 1983, to the administrators or directors of investment of 98 state systems. Answers received represent a 99 percent response rate. Figures for the Public Employees' Retirement Fund of Indiana include the state's Judges' Retirement System, which was incorporated into the larger system as of July 1.

Few systems reported a change in the *structure* of their fund management in the past year. Only five funds added discretionary managers for the first time, and three added nondiscretionary advisors. However, the public funds appear to be following the private sector trend of diversifying assets among managers, with 17 systems adding a total of 59 new discretionary managers for some portion of their portfolio. The number of new managers per fund ranges from one each for the New York State Common Retirement Fund, South Dakota Retirement System, and Employees Retirement System of Texas to seven for the Public School Employes' Retirement System of Pennsylvania.

In the past year, state funds have made impressive gains in size. With holdings of each state's funds combined, nine states increased, on a dollar-for-dollar basis, more than 25 percent. Eight states increased 21 to 25 percent, 21 states increased 16 to 20 percent, six states increased 11 to 15 percent, and five states increased 0 to 10 percent. Only one state showed a decrease for the period.

Several points should be noted for accurate interpretation of the following data.

- All figures are at cost unless otherwise noted and are based on completed responses to the *Pension World* questionnaire.
- Where breakdowns were provided by the state systems, government-insured mortgages are included in the "Mortgage" category and noted as such.
- Because some states included receivables, member loans, accrued interest, etc., in the figure for "Total Assets" but did not show these items under individual categories, the breakdowns for some systems may not add up to the figure given for "Total Assets."
- Where funds are described as "internally administered," any investment advisors listed are nondiscretionary unless otherwise noted.
- Investments in the "Other" category, as itemized by individual systems, included gold, convertibles, GIC's, CD's, private placements, foreign securities, Canadians, government-guaranteed loans, venture capital, capitol notes, FHA promissory notes and certificates of beneficial ownership, building certificates, warrants, world bank bonds, and municipals.

Name and address of fund	Contact person and phone	Total assets (in millions $)	Common and preferred stock (in millions $)	U.S. gov't securities and agencies (in millions $)	Corporate bonds (in millions $)
The Retirement Systems of Alabama 135 South Union Street Montgomery, AL 36130	David G. Bronner Secretary/Treasurer 205/832-6950	3,275.2 (bk.)	77.7 (bk.)	5.3 (bk.)	1,335.9 (bk.)
State of Alaska Public Employees' Retirement System Pouch SB Juneau, AK 99811	Brian C. Andrews Comptroller 907/465-2350	770.8	60.2	227.3	32.9
State of Alaska Teachers Retirement System Pouch SB Juneau, AK 99811	Brian C. Andrews Comptroller 907/465-2350	543.1	60 0	137.3	26.4
Arizona Public Safety Personnel Retirement Fund Suite 411 3033 North Central Avenue Phoenix, AZ 85012	Lowell Sutton Administrator 602/274-3003	516.6	116.3	104.1	185.1
Arizona State Retirement System P.O. Box 33910 Phoenix, AZ 85067	Max Sullivan Director 602/255-5131	2,288.9	754.3	632.7	397.2
Arkansas Public Employees Retirement System One State Capitol Mall Little Rock, AR 72201	Fred E. Henne Executive Director 501/371-1745	552.0 (bk.)	91.0 (bk.)	141.0 (bk.)	243.0 (bk.)
Arkansas State Highway Employees Retirement System P.O. Box 2261 Little Rock, AR 72203	J. E. McCarthy Executive Secretary 501/569-2515	108.8	17.7	37.6	48.7
Arkansas State Police Retirement System One State Capitol Mall Little Rock, AR 72201	Fred E. Henne Executive Secretary 501/371-1745	31 (bk.)	4 (bk.)	6 (bk.)	16 (bk.)
Arkansas Teacher Retirement System Education Building West Capitol Mall Little Rock, AR 72201	Mavolene C. Booth Asst. Director for Investments 501/371-1517	733	232 (common)	179	195
Legislators Retirement System of the State of California 1416 Ninth Street Sacramento, CA 95812	Sidney C. McCausland Chief of Investments 916/445-7700	40.5 (bk.)	8.2 (bk.)	0.9 (bk.)	9.7 (bk.)
Public Employees' Retirement System of California 1416 Ninth Street Sacramento, CA 95812	Sidney C. McCausland Chief of Investments 916/445-7700	18,948.8 (bk.)	3,755.2 (bk.)	1,578.9 (bk.—includes int'l institutions, Canadians)	6,607.1 (bk.)
State Teachers Retirement System of the State of California 1416 Ninth Street Sacramento, CA 95812	Sidney McCausland Chief of Investments 916/445-7700	10,547.4 (bk.)	1,805.1 (bk.)	955.8 (bk.)	3,740.2 (bk.)
Public Employees' Retirement Association of Colorado 1300 Logan Street Denver, CO 80203	Robert Gray Administrative Aide 303/832-9550	3,288	1,136	555	546
Connecticut State Retirement Systems 20 Trinity Street Hartford, CT 06115	Guy E. Garcia Asst. Investment Officer 203/566-3705	2,442.1	835.0	412.6	591.8
Delaware State Employees Retirement Fund P.O. Box 1401 Dover, DE 19901	Donald McArdle Pension Administrator 302/736-4208	592.8 (mkt.)	359.6 (mkt.)	4.4 (mkt.)	.7 (mkt.)
District of Columbia Judges' Retirement Fund 415-12th Street, NW, Room 224 Washington, DC 20004	Jorge Morales Deputy Executive Director 202/727-3566	5.2 (mkt.)	2.5 (mkt.)	2.4 (mkt.)	

Mortgages (in millions $)	Other real estate (in millions $)	Cash and short-term securities (in millions $)	Other (in millions $)	Reporting date	Investment advisors
1,002.0 (bk.—gov't-backed)		288.1 (bk.)	566.2 (bk.)	3/31/83	Internal administration; First National Bank of Birmingham—AM South
250.9 (private) 11.3 (gov't-backed)		188.1		5/25/83	Discretionary: Morgan Guaranty Trust Co., Alliance Capital Management Corp.
189.4 (private) 6.5 (gov't-backed)		102.6	20.9	5/25/83	Discretionary: Morgan Guaranty Trust Co., Alliance Capital Management Corp.
		108.8		3/31/83	Internal administration; Duff & Phelps
162.6 (private) 11.7 (gov't-backed)		330.4		6/30/82	Discretionary: Bernstein-Macaulay, INVESCO Capital Management, Kemper Financial Services, Valley National Bank, Alliance Capital Management Corp., Fiduciary Trust Co. of New York; Nondiscretionary: E.F. Hutton, A.G. Becker
62.0 (bk.—gov't-backed)		12.0 (bk.)	3.0 (bk.)	3/31/83	Internal administration; Loomis, Sayles & Co.
		0.8	1.2	3/31/83	Internal administration; Loomis, Sayles & Co.
3 (bk.—gov't-backed)		1	1	3/31/83	Internal administration; Loomis, Sayles & Co.
29 (private) 12.4 (gov't-backed)		68.8		2/28/83	Internal administration; Oppenheimer Capital Corp.
20.7 (bk.—gov't-backed)		.5 (bk.)	0.6 (bk.)	3/31/83	Internal administration
865.7 (bk.—private) 4,860.5 (bk.—gov't-backed)	437.4 (bk.)	808.0 (bk.)	36.1 (bk.)	3/31/83	Internal administration; Financial Investment Advisor (real estate equity), Citicorp Investment Management (equities)
260.0 (bk.—private) 3,091.8 bk.—gov't-backed)		694.6 (bk.)	0.1 (bk.)	3/31/83	Internal administration; Travelers Investment Management Services (equities)
451	57	199	344	3/31/83	Internal administration; Provident National Bank, Bankers Trust Co.
203.7 (private)	88.2	253.3	57.5	3/31/83	Internal administration; David L. Babson & Co., Connecticut Bank & Trust, Bernstein-Macaulay, Capital Guardian Trust Co., CIGNA, Connecticut National Bank
.4 (mkt.—gov't-backed)	69.2 (mkt.)	59.1 (mkt.)	100.3 (mkt.)	3/31/83	Discretionary: T. Rowe Price, Wells Fargo Bank, Aetna Life & Casualty Co., Lincoln Capital Management Co.
		.3 (mkt.)		3/31/83	Discretionary: Alliance Capital Management Corp., Century Capital Assocs., Loomis, Sayles & Co., T. Rowe Price, Riggs National Bank, First Merchants National Bank, American Security Bank; Nondiscretionary: Meidinger, Inc.

Name and address of fund	Contact person and phone	Total assets (in millions $)	Common and preferred stock (in millions $)	U.S. gov't securities and agencies (in millions $)	Corporate bonds (in millions $)
District of Columbia Police Officers and Fire Fighters' Retirement Fund 415-12th Street, NW, Room 224 Washington, DC 20004	Jorge Morales Deputy Executive Director 202/727-3566	181.4 (mkt.)	99.7 (mkt.)	63.4 (mkt.)	
District of Columbia Teacher's Retirement Fund 415-12th Street, NW, Room 224 Washington, DC 20004	Jorge Morales Deputy Executive Director 202/727-3566	169.7 (mkt.)	88.1 (mkt.)	69.4 (mkt.)	
Florida Retirement System Pension Fund State Board of Administration 1230 Blountstown Highway Tallahassee, FL 32304	E. J. Yelton Executive Director 904/488-4406	5,701	1,869	2,166	1,329
Georgia Firemen's Pension Fund 720 Church Street Decatur, GA 30031	James Stewart Secretary/Treasurer 404/377-3310	44.0	11.4	26.4	
Peace Officers' Annuity & Benefit Fund of Georgia P.O. Box 56 Griffin, GA 30224	Flynt Langford Secretary/Treasurer 404/228-8461	41.5	8.0	11.5	10.7
Sheriffs' Retirement Fund of Georgia P.O. Box 56 Griffin, GA 30224	Flynt Langford Secretary/Treasurer 404/228-8463	8.5	1.7	3.5	1.2
Georgia State Retirement Systems Two Northside 75 Atlanta, GA 30318	Graham R. Lynch Director 404/656-2151	3,812	957	719	1,698
Employees' Retirement System of the State of Hawaii 888 Mililani Street, Suite 502 Honolulu, HI 96813	David Y. Shimabukuro Asst. Secretary 808/548-7595	1,829.9	381.3	393.3	201.1
Public Employee Retirement System of Idaho State House Boise, ID 83704	Robert H. Venn Executive Director 208/334-3365	549.3	235.2	43.6	80.1
Illinois Municipal Retirement System 100 South Wacker Drive Chicago, IL 60606	H. Mori Investment Manager 312/346-6722	1,626 (mkt.)	452 (mkt.)	645 (mkt.)	300 (mkt.)
Illinois State Board of Investment 180 North LaSalle Street, Suite 905 Chicago, IL 60601	Robert J. Harmon Director 312/793-5710	1,504.0 (mkt.)	657.5 (mkt.)	201.5 (mkt.)	316.5 (mkt.)
State Universities Retirement System of Illinois 50 Gerty Drive Champaign, IL 61820	Charles M. Hundley Associate Director 217/333-3860	1,450	644	35	283
Teachers' Retirement System of the State of Illinois 2815 West Washington Street Springfield, IL 62708	Charles F. Hofer Investment Officer 217/753-0370	3,348 (mkt.)	780 (mkt.—includes convertibles)	1,274 (mkt.)	542 (mkt.)

Mortgages (in millions $)	Other real estate (in millions $)	Cash and short-term securities (in millions $)	Other (in millions $)	Reporting date	Investment advisors
		18.3 (mkt.)		3/31/83	Discretionary: Alliance Capital Management Corp., Century Capital Assocs., Loomis, Sayles & Co., T. Rowe Price, Riggs National Bank, First Merchants National Bank, American Security Bank; Nondiscretionary: Meidinger, Inc.
		12.2 (mkt.)		3/31/83	Discretionary: Alliance Capital Management Corp., Century Capital Assocs., Loomis, Sayles & Co., T. Rowe Price, Riggs National Bank, First Merchants National Bank, American Security Bank; Nondiscretionary: Meidinger, Inc.
		337		4/30/83	Internal administration
1.3 (private)		4.9		3/31/83	Discretionary: First National Bank of Atlanta; Nondiscretionary: Merrill Lynch
0.3 (private)		11.0		3/31/83	Internal administration; Thorndike, Doran, Paine & Lewis
		2.1		3/31/83	Internal administration; MH/EDIE Investment Counsel
36 (private) 101 (gov't-backed)	13	288		3/31/83	Internal administration; Citizens & Southern National Bank, Trust Company Bank, INVESCO Capital Management, Thorndike, Doran, Paine & Lewis, First National Bank of Atlanta
441.7 (private) 103.5 (gov't-backed)	23.0	152.0	134.0	3/31/83	Internal administration; Bernstein-Macaulay, Delaware Investment Advisers, Eagle Management & Trust Co., Fayez Sarofim and Co., Lehman Management Co., Loomis, Sayles & Co., Pacific Investment Management Co., Scudder, Stevens & Clark, Security Pacific Investment Managers, Wentworth, Hauser, & Violich
29.8	60.2	65.8	34.6	6/30/82	Discretionary: First Interstate Bank (Boise), N.A., Equitable Life Assurance Society of the U.S., First Security Bank of Idaho, Idaho Bank and Trust Co., Idaho First National Bank, Prudential Insurance Co. of America; Nondiscretionary: Alliance Capital Management Co., Trident Investment Management
61 (mkt.—gov't-backed)		154 (mkt.)	14 (mkt.)	12/31/82	Internal administration; Dillon Read Capital, Funds Advisory Co., MacKay-Shields Financial Corp., Manufacturers Hanover Trust Co.
78.8 (mkt.—gov't-backed)	68.4 (mkt.)	154.9 (mkt.)	26.2 (mkt.)	3/31/83	Internal administration; Aetna Life & Casualty Co. (discretionary-real estate)
270 (gov't-backed)		154	64		Discretionary: Lehman Management Co. (fixed-income), Pacific Investment Management Co. (balanced), Funds Advisory Co. (equity), Batterymarch Financial Management, Fayez Sarofim & Co., Alliance Capital Management Corp. (small capitalization), American National Bank Small Company Fund; Nondiscretionary: Ennis, Knupp and Gold, A.G. Becker
		721 (mkt.)	31 (mkt.)	3/31/83	Discretionary: Batterymarch Financial Management, CMB Investment Counselors, Funds Advisory Co., Dreyfus Management, MacKay-Shields Financial Corp., Pacific Investment Management Co., T. Rowe Price Assocs., Hoisington Investment Management Co., Springfield Marine Bank

Name and address of fund	Contact person and phone	Total assets (in millions $)	Common and preferred stock (in millions $)	U.S. gov't securities and agencies (in millions $)	Corporate bonds (in millions $)
Public Employees' Retirement Fund of Indiana 143 West Market Street Indianapolis, IN 46204	C. Philip Barnes Investment Manager 317/232-1621	1,046		394	448
Indiana State Teachers Retirement Fund 506 State Office Building Indianapolis, IN 46204	Edmond G. Niehoff Asst. Executive Secretary 317/232-3863	681		375	91
Iowa Public Employees Retirement System 100 East Grand Avenue Des Moines, IA 50261	Larry Thompson Investment Accountant 515/281-5224	1,894.4	236.6	403.7 (par)	727.4 (par)
Iowa Public Safety Peace Officers' Retirement System State Capitol Building Des Moines, IA 50319	Roger Barnett Deputy Treasurer 515/281-5369	30.8	7.6	6.5	9.0
Kansas Public Employees Retirement System Jayhawk Tower-8th Floor 700 Jackson Street Topeka, KS 66603	Marshall Crowther Executive Secretary 913/232-6665	1,662.0 (mkt.)	639.8 (mkt.)	328.0 (mkt.)	199.7 (mkt.)
Kentucky Judicial Form Retirement System (Kentucky Judicial Retirement Fund and Kentucky Legislators Retirement Fund) P.O. Box 791 Frankfort, KY 40602	Robert K. Cullen Manager 502/564-5310	35.7	13.9	9.9	2.7
Kentucky Retirement Systems 226 West Second Street Frankfort, KY 40601	Bobby J. McKee Operations Manager 502/564-4646	1,052 (bk.)	284 (bk.)	268 (bk.)	202 (bk.)
Kentucky Teachers' Retirement System 216 West Main Street Frankfort, KY 40601	Stuart A. Reagan Investment Officer 502/564-2057	1,267 (bk.)	181	378	270
Municipal Employees' Retirement System of Louisiana 6750 Van Gogh Avenue Baton Rouge, LA 70806	Janie Sue Byrd Administrator Director 504/925-4812	74.2 (bk.)		54.8 (bk.)	14.1 (bk.)
Louisiana School Employees' Retirement System P.O. Box 44516 Baton Rouge, LA 70804	J. Michael Dodds, III Asst. Secretary/Treasurer 504/925-6484	289	4 (lower of cost or mkt.)	96 (par—includes gov't-backed mortgages)	156 (par)
Louisiana School Lunch Employees' Retirement System 9131 Interline Avenue Baton Rouge, LA 70809	Jennifer Netterville Investment Portfolio Specialist 504/925-6446	57.0	.1	39.0	18.0
Louisiana State Employees Retirement System 502 North Seventh Street Baton Rouge, LA 70804	Vernon Strickland Director 504/342-5088	1,032.0	71	442	326
Louisiana State Police Retirement Fund P.O. Box 66614 Baton Rouge, LA 70896	Richard J. Maciasz Manager 504/925-4878	15 (bk.)		7 (bk.)	6 (bk.)
Teachers' Retirement System of Louisiana P.O. Box 44123 Capital Station Baton Rouge, LA 70804	Jennifer Netterville Investment Portfolio Specialist 504/925-6446	1,694	39	773	642
Maine State Retirement System State Office Building Station #46 Augusta, ME 04333	Roberta M. Weil Executive Director 207/289-3461	532.8 (bk.)	243.9 (bk.)	111.4 (bk.)	76.0 (bk.)

Mortgages (in millions $)	Other real estate (in millions $)	Cash and short-term securities (in millions $)	Other (in millions $)	Reporting date	Investment advisors
87 (gov't-backed)		110	7	3/31/83	Discretionary: American Fletcher National Bank, Indiana National Bank, Lehman Management Co., T. Rowe Price Assocs.
2 (private)		213		6/30/82	Discretionary: Alliance Capital Management Corp., Bank of New York, Indiana National Bank, American Fletcher National Bank, Baxter & Hoops, Indiana National Bank (custodian)
282.3 (par—gov't-backed)		84.4	160.0 (par)	3/31/83	Internal administration (cash and short-term); Discretionary: Boston Co. (fixed-income), Alliance Capital Management Corp. and Capital Guardian Trust Co. (equities)
3.6 (gov't-backed)		2.4	1.6	4/29/83	Internal administration; Loomis, Sayles & Co.
54.1 (mkt.—private)	6.9 (mkt.)	419.6 (mkt.)	13.9 (mkt.)	3/31/83	Discretionary: Capital Supervisors, Investment and Capital Management, PIMCO, Fourth National Bank-Wichita, Robert C. Brown, Reimer & Koger, Bankers Trust Co., Marine Midland Bank; Nondiscretionary: Callan Assocs., Commerce Bank and Trust
		9.3		3/31/83	Internal administration; First Kentucky Co.
128 (bk.—gov't-backed)		170 (bk.)		3/31/83	Internal administration; Capital Supervisors
214 (gov't-backed)	10	149	112.3	3/31/83	Internal administration; Todd Investment Advisors, Alliance Capital Management Corp.
		5.3 (bk.)		4/29/83	Internal administration
		33	10	6/30/82	Internal administration; Hibernia National Bank
		6.3	2.0	4/30/83	Internal administration; Hibernia National Bank
30 (private)	1	161	1	7/31/82	Internal administration; Hibernia National Bank, Security Pacific Investment Managers
		1 (bk.)	1 (bk.)	3/31/83	Internal administration; Louisiana National Bank
		235	5	3/31/83	Internal administration; Hibernia National Bank, Scudder, Stevens, & Clark, Massachusetts Financial Services Co.
4.5 (bk.—gov't-backed)	21.8 (bk.-commingled funds)	65.9 (bk.)	9.3 (bk.)	4/30/83	Discretionary: Alliance Capital Management Corp., Casco Bank & Trust, FLA Asset Management, Fidelity Management, Massachusetts Financial Services Co., Maine National Bank, Merrill Trust Co., Putnam Advisory Services, The Travelers, Morgan Guaranty Trust Co.; Nondiscretionary: Evaluation Assocs.

Name and address of fund	Contact person and phone	Total assets (in millions $)	Common and preferred stock (in millions $)	U.S. gov't securities and agencies (in millions $)	Corporate bonds (in millions $)
Maryland State Retirement and Pension Systems 301 West Preston Street, Room 901A Baltimore, MD 21212	Howard J. France Executive Director 301/383-3798	3,312.5	1,578.4	91.9	990.3
Commonwealth of Massachusetts Reserve Fund One Ashburton Place, Room 1203 Boston, MA 02108	Philip Kett Chief Investment Officer 617/727-2010	201.0		189.0	
Commonwealth of Massachusetts State Employees' Fund One Ashburton Place, Room 1203 Boston, MA 02108	Philip Kett Chief Investment Officer 617/727-2010	1,005.1	75.1	534.6	68.7
Commonwealth of Massachusetts State Teachers' Fund One Ashburton Place, Room 1203 Boston, MA 02108	Philip Kett Chief Investment Officer 617/727-2010	1,219.0	75.4	95.0	59.0
Michigan Judges' Retirement System Michigan Department of Treasury P.O. Box 15128 Lansing, MI 48901	G. H. Linsday Asst. Director, Bureau of Finance 517/373-3140	42.4 (bk.)	10.6 (bk.)	13.4 (bk.)	14.5 (bk.)
State of Michigan Legislative Retirement System Senate Box 30036 Lansing, MI 48909	Thomas G. Baker Director 517/373-0575	27.0	.3	2.9	16.7
Michigan Municipal Employees' Retirement System P.O. Box 30026 Mason Building Lansing, MI 48909	John W. Fonger Manager 517/373-9317	573.2	137.5	202.8	100.6
Michigan Probate Judges' Retirement System Michigan Department of Treasury P.O. Box 15128 Lansing, MI 48901	G. H. Linsday Asst. Director, Bureau of Finance 517/373-3140	8.6 (bk.)	2.3 (bk.)	1.8 (bk.)	3.9 (bk.)
Michigan Public School Employees' Retirement System Michigan Department of Treasury P.O. Box 15128 Lansing, MI 48901	G. H. Linsday Asst. Director, Bureau of Finance 517/373-3140	5,659.4 (bk.)	1,424.7 (bk.)	1,115.8 (bk.)	1,651.0 (bk.)
Michigan State Employees' Retirement System Michigan Department of Treasury P.O. Box 15128 Lansing, MI 48901	G. H. Linsday Asst. Director, Bureau of Finance 517/373-3140	1,652.3 (bk.)	423.7 (bk.)	334.7 (bk.)	477.8 (bk.)
Michigan State Police Pension, Accident & Disability Fund Michigan Department of Treasury P.O. Box 15128 Lansing, MI 48901	G. H. Linsday Asst. Director, Bureau of Finance 517/373-3140	164.6(bk.)	42.7 (bk.)	55.0 (bk.)	50.1 (bk.)
Minnesota State Board of Investment 55 Sherburne Avenue St. Paul, MN 55155	Mike Schmitt Administration Director 612/297-2674	6,306	2,268	2,025	938
Public Employees Retirement System of Mississippi 1704 Sillers Building Jackson, MS 39201	Paul Shelby Director of Finance 601/359-3589	1,488	81	817	455
Missouri Highway and Transportation Employees' and Highway Patrol Retirement System P.O. Box 270 Jefferson City, MO 65102	Mari Ann Winters Secretary to the Board of Trustees 314/751-2824	123.7	52.3	28.5	6.6

Mortgages (in millions $)	Other real estate (in millions $)	Cash and short-term securities (in millions $)	Other (in millions $)	Reporting date	Investment advisors
49.9 (private) 553.6 (gov't-backed)	1.0	57.4		5/12/83	Internal administration; Discretionary (all equity): Johnson, Valliant, Scudder, Stevens & Clark, Wellington Trust, Hambrecht & Quist Equity Management, Gregg, McKay, Knight & McKay, Alliance Capital Management Corp., Atlanta Capital Management Corp., Capital Guardian Trust Co., Eaton & Howard, Vance Sanders Inc., Hagler, Mastrovita & Co., Loomis, Sayles & Co., Investment Advisers, Investment Counsel of Maryland, MacKay-Shields Financial Corp., State Street Bank & Trust Co., Loomis, Sayles & Co.
36.0 (private) 100.0 (gov't-backed)		4.3	8.0	4/29/83	Internal administration
20.0 (private) 400.0 (gov't-backed)		38.9	26.0	4/29/83	Internal administration
20.0 (private) 500.0 (gov't-backed)		47.0	30.0	4/29/83	Internal administration
.5 (bk.—private) .1 (bk.—gov't-backed)		2.7 (bk.)	.5 (bk.)	3/31/83	Internal administration
		6.4		4/30/83	Internal administration
5.2 (gov't-backed)		48.4	78.7	3/31/83	Discretionary: American General Capital Advisors, The Boston Co., Capital Supervisors, Investment & Capital Management Corp.
.07 (bk.—private) .01 (bk.—gov't-backed)	.01 (bk.)	.5 (bk.)	.01 (bk.)	3/31/83	Internal administration
162.4 (bk.—private) 916.1 (bk.—gov't-backed)	18.2 (bk.)	303.0 (bk.)	68.1 (bk.)	3/31/83	Internal administration
43.0 (bk.—private) 271.1 (bk.—gov't-backed)	2.5 (bk.)	83.0 (bk.)	16.5 (bk.)	3/31/83	Internal administration
1.9 (bk.—private) 5.0 (bk.—gov't-backed)	.2 (bk.)	7.8 (bk.)	1.9 (bk.)	3/31/83	Internal administration
299 (gov't-backed)	90	545	141	3/31/83	Internal administration; Discretionary: Fred Alger Management Co., Alliance Capital Management Corp., Beutel Goodman Capital Management Ltd., Forstmann-Leff Assocs., Hellman, Jordan Management Co., IDS Advisory Group, Investment Advisors, Loomis, Sayles & Co., Siebel Capital Management, Herbert R. Smith, Trustee & Investors Co., BMI Capital Management, Waddell & Reed Assocs., Northwestern National Bank, Leiber & Co.
4 (gov't-backed)		88	50	6/30/82	Internal administration; Discretionary (equity): Alliance Capital Management Corp., Fayez Sarofim & Co., Scudder, Stevens & Clark; Nondiscretionary: Hanover Trust Co.
0.2 (gov't-backed)		16.5	19.6	12/31/82	Discretionary: United Missouri Bank of Kansas City, N.A.

Name and address of fund	Contact person and phone	Total assets (in millions $)	Common and preferred stock (in millions $)	U.S. gov't securities and agencies (in millions $)	Corporate bonds (in millions $)
Missouri Local Government Employees Retirement System 1913 William Street Jefferson City, MO 65102	M. Steve Yoakum Asst. Executive Secretary 314/751-3666	217.1	43.4	82.4	34.0
Public School Retirement System of Missouri P.O. Box 268 Jefferson City, MO 65102	David W. Mustoe Executive Secretary 314/751-3414	1,871	237		1,124
Missouri State Employees' Retirement System 900 Leslie Boulevard Jefferson City, MO 65101	Mary Jean Hackwood Executive Secretary 314/751-2342	411.4	183.9	75.5	73.8
Montana State Board of Investments (Public Employees' Retirement System, Teachers Retirement System, Statewide Police Reserve Fund, Highway Patrol Retirement Fund, Sheriffs' Retirement Fund, Firefighters' Unified Retirement System Fund, Montana Judges Retirement Fund, Game Wardens Retirement Fund) Capital Station Helena, MT 59620	Robert Bugni Portfolio Manager 406/449-2656	523.6	53.0	22.8	350.3
Nebraska School Retirement Fund Box 94696 Lincoln, NE 68509	Donald J. Mathes State Investment Officer 402/471-2043	216 (bk.)	45 (bk.)	66 (bk.)	79 (bk.)
Public Employees Retirement System of Nevada 693 West Nye Lane Carson City, NV 89701	Linda Jean Lofgren Investment Analyst 702/885-4206	1,361 (bk.)	182 (bk.)	199 (bk.)	495 (bk.)
New Hampshire Retirement System 169 Manchester Street Concord, NH 03301	Harry M. Descoteau Executive Secretary 603/271-3351	409.9 (bk.)	253.0 (bk.)	77.6 (bk.)	3.6 (bk.)
New Jersey Division of Investment (Consolidated Police and Firemen's Pension Fund, Judicial Retirement System, Police and Firemen's Retirement System, Prison Officers Pension Fund, Public Employees' Retirement System, State Police Retirement System, Teachers' Pension and Annuity Fund) 349 West State Street Trenton, NJ 08625	Roland M. Machold Director 609/292-5106	6,150 (mkt.)	1,650 (mkt.)	1,500 (mkt.)	1,900 (mkt.)
New Mexico Educational Retirement Board P.O. Box 1029 Santa Fe, NM 87503	Bob Short Investment Officer 505/827-8032	716.9 (bk.)	17.3 (bk.-common)	269.8 (bk.)	261.4 (bk.)
Public Employees Retirement Association of New Mexico P.O. Box 2123 Santa Fe, NM 87501	Leonard T. Valdes Executive Secretary 505/827-4700	584.7 (net bk. cost)	186.0 (net bk. cost)	215.1 (net bk. cost)	185.9 (net bk. cost)
New York State Common Retirement Fund Governor A.E. Smith State Office Building Albany, NY 12236	William Hay Chief Investment Officer 212/585-5031	18,600	5,956	5,764	2,881
New York State Teachers' Retirement System 143 Washington Avenue Albany, NY 12210	Edward J. Reno, Jr. Securities Investment Officer 518/477-2750	10,478	3,715	1,925	2,843
North Carolina Retirement Systems 325 North Salisbury Street Raleigh, NC 27611	C. Douglas Chappell Deputy Treasurer/Director-Investment & Banking Div. 919/733-7273	6,542 (bk.)	1,215 (bk.-Equity Inv. Fund)	100 (bk.)	5,158 (bk.-Long-Term Inv. Fund)
North Dakota Public Employees Retirement System P.O. Box 1214 Bismarck, ND 58502	Dave Klemmer Deputy Director 701/224-2975	106.0	37.3	35.9	6.7

Mortgages (in millions $)	Other real estate (in millions $)	Cash and short-term securities (in millions $)	Other (in millions $)	Reporting date	Investment advisors
44.0 (gov't-backed)		9.8	3.5	3/31/83	Discretionary (fixed-income): Centerre Trust Co., Hoisington Investment Management Co., United Missouri Investment Counsel Service; Equity: Loomis, Sayles & Co., Delaware Investment Advisers, INVESCO Capital Management
310 (gov't-backed)	2	145	52	6/30/82	Internal administration; Discretionary: Boatmen's National Bank
9.7 (FHA & VA) 52.3 (gov't-backed)		16.2		3/31/83	Discretionary: Centerre Trust Co., Waddell & Reed Asset Management Co., Delaware Investment Advisers, Alliance Capital Management Corp., Investors Research Corp., AmCal; Nondiscretionary: Callan Assoc.
80.9	0.3	16.3		6/30/82	Internal administration; Scudder, Stevens & Clark
		25 (bk.)	1 (bk.)	3/31/83	Internal administration
221 (bk.—private)	10 (bk.)	1 (bk.)		3/31/83	Internal administration; Discretionary: Funds Advisory Co.
8.0 (bk.—private) .8 (bk.—gov't-backed)	1.7 (bk.)	65.3 (bk.)		6/30/82	Discretionary: Amoskeag National Bank, Investment Advisers, Old Colony Trust, Putnam Advisory, State Street, Dreyfus, INVESCO; Nondiscretionary: Evaluation Assocs.
50 (mkt.—private) 850 (mkt.—gov't-backed)	4 (mkt.)		196 (mkt.)	6/30/82	Internal administration
91.3 (bk.—gov't-backed)		130.0		3/31/83	Internal administration; Vaughn, Nelson, & Hargrove
8.4 (net bk. cost—gov't-backed)	4.5 (net bk. cost)	4.8 (net bk. cost)		3/31/83	Discretionary: Fiduciary Trust Co. of New York
1,919 (private) 1,038 (gov't-backed)		1,042		3/31/83	Internal administration; Alliance Capital Management Corp., Bank of New York, Morgan Guaranty Trust Co., Oppenheimer Capital, L.F. Rothschild Asset Management Corp., J&W Seligman, Lazard Freres, Shearson/American Express
800 (private) 570 (gov't-backed)	19	238	368	3/31/83	Internal administration; Discretionary: Sanford C. Bernstein (equities); Nondiscretionary: Manufactueres Hanover Bank (ecuities)
(included in gov't securities)		169 (bk.-Short-Term Inv. Fund)		3/31/83	Internal administration; Fixed-income: Duff & Phelps; Equity: Alliance Capital Management Corp., Thorndike, Doran, Paine & Lewis, First Citizens Bank & Trust, North Carolina National Bank, Wachovia Bank & Trust Co., First Union National Bank
4.2 (gov't-backed)				3/31/82	Internal administration; Wall, Patterson, McGrew & Hamilton, The Bank of North Dakota

Name and address of fund	Contact person and phone	Total assets (in millions $)	Common and preferred stock (in millions $)	U.S. gov't securities and agencies (in millions $)	Corporate bonds (in millions $)
Ohio State Highway Patrol Retirement System 660 East Main Street Columbus, OH 43205	R. E. Hartsook Secretary 614/466-4960	70.0 (par)	3.4 (cost)	4.6 (par)	58.5 (par)
Police and Firemen's Disability and Pension Fund of Ohio 230 East Town Street Columbus, OH 43215	Richard F. Thompson Investment Manager 614/228-4076	1,315 (bk.)	180 (bk.)	384 (bk.)	358 (bk.)
Public Employees Retirement System of Ohio 277 East Town Street Columbus, OH 43215	Robert A. McLaughlin Investment Officer 614/466-7320	6,894	1,273	600	3,707
School Employees Retirement System of Ohio 45 North Fourth Street Columbus, OH 43215	R. Jack Cooper Asst. Director & Inv. Officer 614/221-7012	1,226.6	256.5	101.2 (par)	354.9 (par)
The State Teachers Retirement Board of Ohio 275 East Broad Street Columbus, OH 43215	Stephen A. Mitchell Director of Investments 614/227-4003	6,908 (bk.)	1,955 (bk.)	1,413.1 (bk.)	699.0 (bk.)
Oklahoma Public Employees Retirement System 580 Jim Thorpe Office Building 2101 North Lincoln Boulevard Oklahoma City, OK 73152	Joann Dunn Chief Accountant 405/521-2381	520 (bk.)	76 (bk.)	110 (bk.)	250 (bk.)
Teachers Retirement System of Oklahoma P.O. Box 53524 Oklahoma City, OK 73152	Jo Witt Investment Officer 405/521-2387	967.6 (bk.)	135.3 (bk.-common)	267.4 (bk.)	430.3 (bk.)
Oregon Public Employees Retirement System Room 158 State Capitol Portland, OR 97310	James George Investment Manager 503/378-4111	2,614.9	869.0	368.7	780.0
Pennsylvania Municipal Retirement Fund Box 1165 Harrisburg, PA 17108	Robert Rossman Secretary 717/787-2065	88.5	32.6	1.6	18.9
Public School Employes' Retirement System Box 125 Harrisburg, PA 17108	R. J. McElroy Director/Bureau of Fiscal Control 717/783-9412	5,457 (amortized bk.-investments only)	1,294	1,105 (amortized bk.)	1,387 (amortized bk.)
Pennsylvania State Employes' Retirement Fund 204 Labor and Industry Building Harrisburg, PA 17120	Edwin B. Warwick Chief Investment Officer 717/783-9705	3,505	1,268	420	740
Employees' Retirement System of the State of Rhode Island 198 Dyer Street Providence, RI 02903	Joseph G. Iannelli Executive Director 401/277-2203	539.0	136.1	183.5	128.4

Mortgages (in millions $)	Other real estate (in millions $)	Cash and short-term securities (in millions $)	Other (in millions $)	Reporting date	Investment advisors
3.4 (par—gov't-backed)		.1		3/31/83	Internal administration; Duff & Phelps Investment Management Co.
		286 (bk.)	107 (bk.)	3/31/83	Internal administration; Equity: Travelers Investment Management, Value Line Asset Management
19 (private)		1,800	350	12/31/82	Internal administration; Value Line Asset Management
25.0 (par—private) 290.5 (par—gov't-backed)	122.9	75.6 (par)		3/31/83	Internal administration; Bankers Trust Co. (equities)
1,011.4 (bk.—gov't-backed)	1,080.0 (bk.)	718.6 (bk.)	30.9 (bk.)	3/31/83	Internal administration; Thorndike, Doran, Paine & Lewis
53 (bk.—gov't-backed)		31 (bk.)		3/31/83	Discretionary: The First National Bank and Trust Co. of Oklahoma City
		134.5 (bk.)		4/30/83	Discretionary: First National Bank and Trust Co. of Oklahoma City
290.0 (private) 92.0 (gov't-backed)	224.0			3/31/83	Discretionary: BEA Assocs., David L. Babson & Co., Columbia Management Co., Rosenberg Capital Management, Fayez Sarofim & Co., Batterymarch Financial Management, Harris Assocs., Quest Advisory Corp., William D. Witter, Glickenhaus & Co., General American Investors Co., Hotchkis & Wiley; Nondiscretionary: Frank Russell Co., Wilshire Assocs.
	4.1 (pooled account)	31.0	.2	4/30/83	Internal administration; Fidelity Bank, Minton/Newbold's Capital Management, Erie Bank
106 (amortized bk.—private) 852 (amortized bk.—gov't-backed)		714 (cost)		4/30/83	Internal administration; Discretionary: State Street Research & Management Co., Oppenheimer Capital Corp., Provident Capital Management, MacKay-Shields Financial Corp., Loomis, Sayles & Co., Pittsburgh National Bank, Manufacturers Hanover Trust Co., The Fidelity Bank, Mellon Bank; Nondiscretionary: Evaluation Assocs.
314 (private) 214 (gov't-backed)		549		12/31/82	Discretionary: Alliance Capital Management Corp., Mellon Bank, Wells Fargo Investment Advisors, Philadelphia Savings Fund Society, Miller, Anderson & Sherrerd
10.7 (gov't-backed)		74.8	5.4	6/30/82	Internal administration

Name and address of fund	Contact person and phone	Total assets (in millions $)	Common and preferred stock (in millions $)	U.S. gov't securities and agencies (in millions $)	Corporate bonds (in millions $)
South Carolina Retirement System P.O. Box 11778 Columbia, SC 29211	Shakun Tahiliani Investment Manager 803/758-2398	2,338.0		524.0	657.0
South Dakota Retirement System 216 East Capitol Pierre, SD 57501	Al Asher Administrator 605/773-3731	412.0	131.0	186.0	1.0
Tennessee Consolidated Retirement System P.O. Box 2867 Nashville, TN 37027	H. Swift Lipscomb Chief Investment Officer 615/741-7063	2,800.0 (mkt.)	700.0 (mkt.)	1,400.0 (mkt.)	560.0 (mkt.)
Employees Retirement System of Texas P.O. Box 13207 Austin, TX 78711	John B. Randolph Director of Investments 512/476-6431	2,213.8 (bk.)	406.7 (bk.)	841.6 (bk.)	780.7 (bk.)
Teacher Retirement System of Texas 1001 Trinity Street Austin, TX 78701	Bruce Hineman Executive Secretary 512/397-6401 Clark Manning Deputy Exec. Sec. for Investments 512/397-6460	7,914 (bk.)	2,462 (bk.)	1,092 (bk.)	2,036 (bk.)
Utah State Retirement System 540 East 200 South Salt Lake City, UT 84102	W. Dan Smith Investment Officer 801/355-3884, ex. 307	1,532	243	411	376
Vermont State Retirement System 133 State Street Montpelier, VT 05602	Edwin C. Gallison Deputy State Treasurer 802/828-2305	93.3 (bk.)	29.0 (bk.)	14.0 (bk.)	25.3 (bk.)
State Teachers' Retirement System of Vermont 133 State Street Montpelier, VT 05602	Edwin C. Gallison Deputy State Treasurer 802/828-2305	114 (bk.)	44 (bk.)	12 (bk.)	11 (bk.)
Virginia Supplemental Retirement System P.O. Box 6-C Richmond, VA 23214	Jonathan White Chief Investment Officer 804/786-8807	3,026 (mkt.)	1,634 (mkt.)	726 (mkt.)	242 (mkt.)
State of Washington, State Investment Board (Employees Retirement Fund, Teachers Retirement Fund, Law Enforcement Officers and Firefighters Fund, Judicial Retirement Fund) 421 South Capitol Way FR-31 Olympia, WA 98504	David L. Lodefink Deputy Director 206/753-6810	6,358	1,960	1,382	930
West Virginia Public Employees Retirement System Building 5, Room 148 Capitol Complex Charleston, WV 25305	George V. Crum Administrative Assistant 304/348-2031	545.9		205.2	151.1
State of Wisconsin Investment Board P.O. Box 7842 Madison, WI 53707	Kenneth E. Codlin Executive Director 608/266-2044	8,400 (mkt.)	3,000 (mkt.)	500 (mkt.)	2,990 (mkt.)
Wyoming Retirement System Third Floor-Barrett Building Cheyenne, WY 82002	Jeffery E. Gardner Deputy Director 307/777-7691	441.4		197.2	164.2

Mortgages (in millions $)	Other real estate (in millions $)	Cash and short-term securities (in millions $)	Other (in millions $)	Reporting date	Investment advisors
299.0 (GNMA)	95.0 (MGIC)	270.0	493.0	4/25/83	Internal administration; Jamison, Eaton & Wood
		94.0		3/31/83	Internal administration; Discretionary: Eagle Management and Trust, Dreman, Gray and Embry
3.0 (mkt.)		140.0 (mkt.)		6/30/82	Internal administration
150.0 (bk.—gov't-backed)		34.7 (bk.)		5/31/83	Internal administration; Hutton Capital Management (equities), Duff & Phelps Investment Management Co. (fixed-income)
425 (bk.—private) 1,661 (bk.—gov't-backed)		236 (bk.)		3/31/83	Internal administration; Thorndike, Doran, Paine & Lewis
66 (private)	88	348		3/31/83	Internal administration; Smoot Knoche & Co., Value Line Asset Management, Capital Consultants, Wasatch Advisors
8.0 (bk.—private)		5.3 (bk.)	11.7 (bk.)		Discretionary: Brundage, Story & Rose, Colonial Management Assocs., Loomis, Sayles & Co.
15 (bk.—private)	4 (bk.)		28 (bk.)	6/30/82	Discretionary: Delaware Investment Advisers, Colonial Management Assocs.
96 (mkt.—private)	161 (mkt.)	168 (mkt.)		3/31/83	Discretionary: Bank of New York, MacKay-Shields Financial Corp., Putnam Advisory Corp., Batterymarch Financial Management, Delaware Investment Advisers, Lincoln Capital Management Co., IDS Advisory Group, Modern Portfolio Theory Assocs., Massachusetts Financial Services Co., Equitable Life Assurance Society, Prudential Insurance Co., Rosenberg Capital Management
290 (private) 937 (gov't-backed)	30	696	133	3/31/83	Internal administration; Columbia Management Co., Loomis, Sayles & Co., United Capital Management, Schafer Capital Management Co., Batterymarch Financial Management Co., Torray Clark & Co., Wells Fargo Investment Advisors
99.0 (gov't-backed)		45.3		12/31/82	Internal administration; Loomis, Sayles & Co.
200 (mkt.—private) 300 (mkt.—gov't-backed)	10 (mkt.)	1,400 (mkt.)		6/30/82	Internal administration
14.2 (gov't-backed)		65.8		3/31/83	Discretionary: Alliance Capital Management Corp., Wyoming National Bank, Lehman Management Corp.

SEPTEMBER 1983

Pension World

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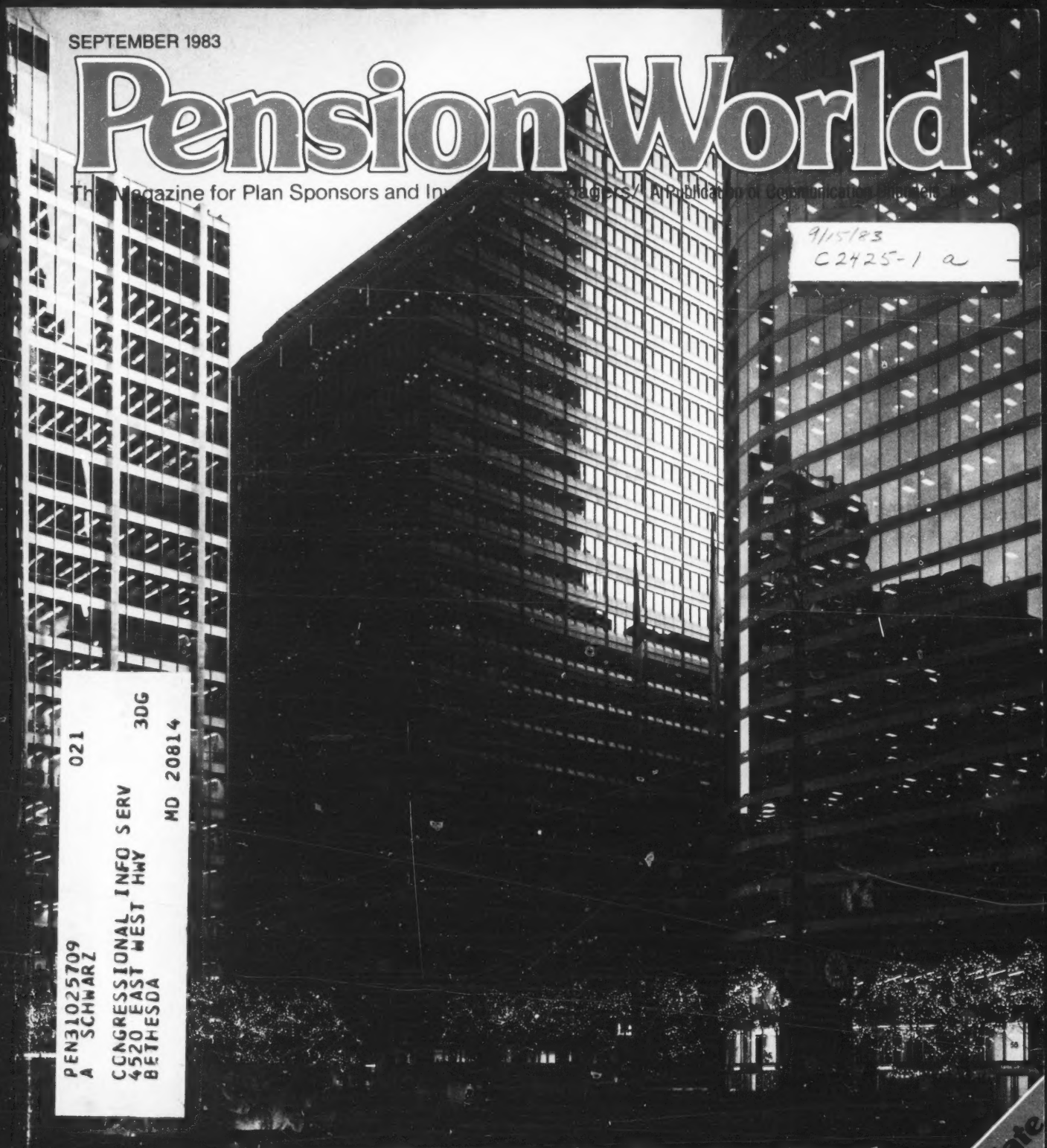

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Real Estate Investing by Pension Funds

Real Estate: Illiquid but Logical?

A Look at TIAA/CREF

Sixth Annual Real Estate Portfolio Manager Directory

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Pension World

September 1983
Volume 19 Number 9

The Magazine for Plan Sponsors and Investment Managers/A Publication of Communication Channels, Inc.

Features

Real Estate: Illiquid but logical investment for funds by Robert E. Christenson **15**
Since pension funds are concerned with the long-term, the illiquidity of real estate investments may be considered a benefit and may work to an advantage for the fund. This article takes a look at this rationale.

1983 Survey: Real estate investing by pension funds **19**
Money Market Directories, Inc., releases its latest data on plan sponsor interest in real estate and looks at the investment trends that may be developing in the future.

Investment Management: A university professor looks at TIAA/CREF by Roy A. Schotland **35**
The $28 billion TIAA/CREF is the second largest non-federal pension fund, but because of its limited choice of investment vehicles and lack of flexibility, improvements are needed. Would adding alternatives be the answer?

Investment Management: A plan sponsor's view of cash management techniques by Joseph L. Fromm **41**
The assistant treasurer of American Motors Corp. examines electronic funds transfer (EFT) as another cash management technique available to plan sponsors as a way to control expenses.

Current Issues in Plan Design: Norris decision will narrow employee choices by Philip M. Alden, Jr. **44**
Exactly what does this landmark Supreme Court decision mean to sponsors of employee retirement plans? Will this decision set a precedent that, in the future, might prove regrettable to employees? How might this decision limit employee choices?

6th Annual Real Estate Portfolio Manager Directory **61**
Pension World's exclusive listing of real estate portfolio managers includes 106 firms currently handling pension funds, plus their returns on investment, fee structures, participation offered, breakdown of investments in real estate, and more.

Pension World Basics: Effective use of welfare benefit dollars by Herbert V. Kaighan **89**
Part III of this three-part series on getting the most from the welfare benefit dollar deals with administration, profiling cost-effective ways to administer benefits. The author also emphasises the importance of communication in getting the "biggest bang for the buck" in a benefits program.

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Cover: **About $4 billion in real estate equities was added to corporate and public pension fund portfolios during the last year. Although this is lower than the amount projected in last year's survey, pension fund investment managers know the value of real estate in a fund's portfolio. *PW*'s real estate coverage begins on page 15.**

Cover photo: 33 West Monroe, Chicago, Ill. Photo courtesy of Richard Ellis, Inc., Chicago, Ill.

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1983 Survey

Real estate investing by pension funds

Corporate and public pension sponsors added approximately $4 billion in real estate equities to their portfolios during the past 12 months. During the next three years, they are planning to add an additional $12 billion to $15 billion in real estate equity. In total, corporate and public plans currently own about $22 billion in real estate equities, which represents 2½-3 percent of their total pension fund assets.

These are the major findings of the seventh annual *Real Estate Investing by Pension Funds* survey conducted by Money Market Directories, Inc., during May, 1983. Real estate investing questionnaires were mailed to 1,200 senior investment officers of corporate and public pension funds representing approximately $800 billion in assets. This group comprises 80 percent of total pension assets. Two hundred and forty-eight questionnaires were returned for a response rate of 20 percent. These 248 respondents have $178 billion in pension assets or 22 percent of the total assets among the largest 1,200 funds.

Summarized below are the most significant findings of the 1981, 1982, and 1983 survey results.

Anticipated Purchases During Next 3 Years	**1981**	**1982**	**1983**
Number of funds planning purchases	122	140	63
Percentage planning purchases	55%	54%	25%
Total portfolio assets of purchasers	$ 42 bil.	$103 bil.	$ 75 bil.
Total real estate to be purchased	$ 3.2 bil.	$ 6.5 bil.	$ 3.3 bil.
Commingled real estate	$ 1.6 bil.	$ 1.9 bil.	$ 1.1 bil.
Direct real estate ownership	$ 1.6 bil.	$ 4.6 bil.	$ 2.2 bil.
Real estate future purchases as a percent of portfolio assets	7.6%	6.3%	4.4%
Average real estate commitment per fund	$ 26 mil.	$ 46 mil.	$ 52 mil.

Current Ownership	**1981**	**1982**	**1983**
Number of respondents	205	258	248
Number of funds owning real estate	90	120	123
Percentage owning real estate	44%	47%	50%
Total portfolio assets of real estate owners	$ 40 bil.	$ 68 bil.	$101 bil.
Total real estate owned	$ 2.3 bil.	$ 4.4 bil.	$ 5.4 bil.
Commingled real estate	$ 1.6 bil.	$ 2.7 bil.	$ 2.7 bil.
Direct real estate ownership	$ .7 bil.	$ 1.7 bil.	$ 2.7 bil.
Real estate as a percent of portfolio assets	5.8%	6.5%	5.3%
Average real estate investment per fund	$ 25 mil.	$ 37 mil.	$ 44 mil.

Observations and overview. When the 1983 real estate survey is compared with last year's survey results, projected new real estate equity investments are down 50 percent. The actual real estate commitment for the past 12 months was $4 billion, not the $8 billion forecasted by last year's survey.

Based upon the survey results and comments from fund sponsors, it appears that a number of interrelated reasons account for this decline. Real estate investing by pension funds must be viewed in perspective with their overall investing strategy.

The financial equity and bond markets are more volatile than the real estate market. When the financial markets started their dramatic increase in August of 1982, pension funds and their managers were quick to allocate as much capital as prudent to these markets to gain as much of the price increases as they could. Some capital that had been earmarked for real estate investment was directed instead to the stock and bond markets.

Concurrent with the surging stock market was the perception by pension fund officers that the real estate market had temporarily peaked and that the price performance of real estate would not be as good during the remainder of 1982 and all of 1983 as it had been in the period 1978-81. This perception has proven to be true as evidenced by the Prudential Insurance Company's PRISA Fund turning in a negative appreciation performance in 1982—the first since its inception. With the improvement in the stock and bond markets, the leveling off of the real estate market, and a lower inflation expectation, real estate investing intentions are, understandably, lower. Three questions from the 1983 questionnaire indirectly measure these inflation expectations.

1. The amount of capital that pension funds expect to invest in mortgages and real estate financing is 50 percent greater than in 1982.

The information contained in this survey has been researched, edited, and copyrighted by Money Market Directories, Inc., publishers of the Money Market Directory of Pension Funds and their Investment Managers, *the encyclopedia of pension funds with assets over $1 million and their investment advisors. Included in Money Market Directories' data base is real estate ownership by all major U.S. pension funds. For further information, contact David Bowerman, Vice President, 300 East Market St., Charlottesville, VA 22901, (800) 446-2810.*

2. The fixed income component of the hypothetical 1955 portfolio is higher by 4 percent.

3. The amount of appreciation pension fund officers expect from real estate equity investments is lower.

It is clear that, in the short-term, pension fund officers feel that real estate equity investments are postponable with little risk of missing an upsurge in real estate prices.

As a long-term investment, pension fund officers have not changed their thinking about the benefits equity real estate ownership can have on the investment returns of their portfolio. They are aware that real estate equity investments have out-performed financial equities during the past 10 years.

According to the Funds Evaluation Division of A.G. Becker Paribas, Inc., the median investment return achieved by equity managers over the period 1973-82 was 5.4 percent. The range of returns has been from 12.3 percent at the 5th percentile level to 2 percent at the 95th percentile. During this same time period, Prudential's PRISA real estate fund returned an average of 14.4 percent annually. (PRISA is used as an example of real estate performance because with $4.3 billion in total assets, it represents nearly 20 percent of all pension assets invested in real estate.)

Thus, while the anticipated pension fund commitment to real estate equity is significantly lower in this year's survey, it appears to be the result of pension officers attempting to maximize their current investment returns by increasing their financial equity commitments at a time when they believe that financial equities will outperform real estate equities. It does not signal a fundamental change in the established trend of expanding ownership of equity real estate by pension funds.

Real estate industry responsiveness. Beginning in the mid-1970's, when the real estate industry began its marketing of equity and mortgage products to pension funds, frequently criticism was heard from pension investment officers that "real estate people just don't understand the investment requirements of pension funds." The lack of real estate products that matched both pension fund investment and fiduciary objectives was often cited as the main obstacle for fund participation in real estate.

One of the questions in this year's survey was whether or not pension fund investment officers believed that the real estate industry had done anything to answer their concerns. The answer seems to be an unequivocal "yes," as shown in the response to the following question:

Do you believe that the real estate industry has been responsive to the investment requirements of pension sponsors in terms of the real estate equity products they offer to pension funds?

Yes	70%
No	13%
Did not answer	17%

The respondents were also asked why they answered the way they did. The most frequent comments were: "There is a wide variety of real estate equity products available to meet individual pension fund needs," and "Real estate equity products recognize the tax exempt status of pension funds."

The major negative comments were that the existing real estate products "should offer better liquidity" and that "better methods were needed to determine annual appreciation."

The amount of pension officer satisfaction with mortgage and real estate financing products was measured by asking:

Do you believe that the real estate industry has been responsive to the investment requirements of pension sponsors in terms of the real estate financing and mortgage products they offer to pension funds?

Yes	63%
No	13%
Did not answer	24%

Fully 63 percent of the survey respondents felt that the real estate industry had been responsive. The comment most often volunteered for their satisfaction was that "there is a wide variety of mortgage and financing products available for pension funds." There were few negative comments, but one that merits inclusion is, "The products are very complex, and this often discourages pension fund trustees."

Based on the answers to these two questions and the growing ownership of real estate equities and mortgage products by pension funds, it is apparent that individuals in the real estate industry have developed products for pension funds that the funds find acceptable.

General Investing Trends

Do you regard real estate equity investments as being capable of contributing consistently to your fund's performance?

	1977	1980	1981	1982	1983
Yes	59%	77%	83%	79%	73%
No	37%	18%	10%	17%	19%
Did not answer	4%	5%	7%	4%	8%

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What would you regard as the minimum acceptable net cash yield to the fund from real estate equity investments?

	1977	1980	1981	1982	1983
Specified a minimum of under 7%	N/A	N/A	N/A	N/A	6%
Specified a minimum of 7%	21%	11%	18%	9%	4%
Specified a minimum of 8%	18%	13%	20%	20%	12%
Specified a minimum of 9%	17%	14%	11%	10%	11%
Specified a minimum of 10%	17%	17%	19%	20%	18%
Specified a minimum in excess of 10%	9%	21%	26%	28%	N/A
Specified a minimum of 11%	N/A	N/A	N/A	N/A	1%
Specified a minimum of 12%	N/A	N/A	N/A	N/A	9%
Specified a minimum in excess of 12%	N/A	N/A	N/A	N/A	9%
Did not answer	18%	24%	6%	13%	30%

What would be your minimum expectation for annual appreciation from real estate equity investments?

	1977	1980	1981	1982	1983
Identified 2% appreciation as the minimum acceptable rate	9%	3%	1%	1%	3%
Identified 3% appreciation as the minimum acceptable rate	12%	4%	5%	7%	8%
Identified 4% appreciation as the minimum acceptable rate	6%	6%	8%	11%	8%
Identified 4+% appreciation as the minimum acceptable rate	48%	66%	70%	73%	43%
Identified 6+% appreciation as the minimum acceptable rate	—	—	46%	46%	23%
Identified 8+% appreciation as the minimum acceptable rate	—	—	32%	30%	15%
Did not answer	21%	21%	14%	19%	38%

The total assets of all pension funds are expected to increase from just over $850 billion today, to over $5 trillion by 1995. What do you estimate the allocation of your pension fund assets will be in the year 1995?

	1981 Survey		1982 Survey		1983 Survey	
	$ in Billions	Percent	$ in Billions	Percent	$ in Billions	Percent
Cash	N/A	N/A	$ 450	9%	$ 350	7%
Equities	$2,450	49%	$2,250	45%	$2,500	50%
Fixed Income	$1,150	23%	$1,100	22%	$1,300	26%
Mortgages	$ 250	5%	$ 200	4%	$ 100	2%
Real Estate Equity	$ 300	6%	$ 300	6%	$ 250	5%
Real Estate Commingled Funds	$ 300	6%	$ 300	6%	$ 200	4%
International Investments	$ 300	6%	$ 250	5%	$ 150	3%
Venture Capital	$ 100	2%	$ 100	2%	$ 100	2%
Collectables and Precious Metals	$ 50	1%				
Other	$ 100	2%	$ 50	1%	$ 50	1%
	$5,000	100%	$5,000	100%	$5,000	100%

The Department of Labor is planning to ease the current ERISA rules governing prohibited transactions between a corporate pension fund and parties-in-interest, as these rules affect mortgage purchases. Do you believe that these new guidelines will result in more mortgage purchases by your pension fund than would otherwise be the case?

	1983
Yes	11%
No	81%
Did not answer	8%

Does your fund intend to purchase new real estate investments during the next three years?

	1981		1982		1983	
	Number	Percent	Number	Percent	Number	Percent
Yes — Direct Ownership	38	18%	50	19%	17	7%
Yes — Commingled	89	43%	110	43%	52	21%
No — Direct Ownership	167	82%	208	81%	231	93%
No — Commingled	116	57%	148	57%	196	79%

Direct real estate equity investing. Although planned real estate investing amounts are lower than last year's planned amounts, the currently promised $3 billion to $4 billion a year in additional real estate investments is a very substantial sum. Many individual properties plus generous portions of management expertise will be needed to invest and direct this amount of capital.

Two-thirds of the planned investment in real estate will be the purchase and management of individual properties for pension funds, (in individual accounts) run by banks, insurance companies, and SEC registered real estate advisors. This emphasis on direct real estate participation continues a trend which was first observed in our 1982 survey. The public funds again account for the majority of the planned direct equity real estate purchases, with $1.7 billion of the planned $2.17 billion.

Please refer to the following charts for details on current and planned direct real estate equity investments.

Has your fund participated in direct real estate investment utilizing the management expertise of an outside real estate counselor?

	1981	1982	1983
Yes	9%	8%	8%
No	83%	84%	91%
Did not answer	8%	8%	1%

If yes, with what type of an organization?

	1981	1982	1983
Insurance Company	26%	14%	40%
Bank	26%	24%	45%
Investment Banker	10%	10%	5%
Developer	5%	14%	20%
Registered Real Estate Management Firm	26%	48%	30%
Broker or Realtor	21%	—	10%
Real Estate Consultant	—	—	25%
Other	—	10%	5%

Has your fund participated in real estate development?

	1982	1983
Yes	4%	3%
No	90%	97%
Did Not Answer	6%	—

If yes, did your fund develop the property alone or with other organizations?

	1982[1]	1983[2]
Alone	22%	62%
With Others	78%	38%

[1]*Based on 9 responses*
[2]*Based on 8 responses*

If with others, please indicate the type of organization.

	1982[3]	1983[4]
Insurance Company	14%	67%
Developer	43%	33%
Registered Real Estate Management Firm	29%	33%
Bank	—	33%
Investment Banker	—	—
Broker or Realtor	—	—
Real Estate Consultant	—	—
Pension Fund	—	67%

[3]*Based on 7 responses*
[4]*Based on 3 responses*

The direct ownership of real estate equities is distributed among property types as follows:

Type	Current Ownership[5] Amount (in mil.)	Percent	Planned — Next 3 Years[6] Amt. Purchased (in mil.)	Amt. Developed (in mil.)	Percent
Office Buildings	$ 998	37%	$ 692	$ —	32%
Hotels	9	—	68	5	3%
Apartments	13	1%	174	15	9%
Industrial	148	6%	439	—	20%
Small Shopping Centers	5	—	5	—	—
Medium Shopping Centers	165	6%	124	15	6%
Large Shopping Centers	115	4%	321	—	15%
Warehouses	54	2%	52	10	3%
Agriculture Land	—	—	—	—	—
Raw Land	18	1%	—	—	—
Retail Stores	889	33%	—	—	—
Other	6	—	15	—	1%
Not Specified	269	10%	235	—	11%
Current Total:	$2,689		$2,125	$ 45	
			Total Additional: $2,170		

[5]*Response Group composed of: 18 corporation funds owning $471 million in real estate; 11 government funds owning $2,218 million in real estate.*

[6]*Response Group composed of: 6 corporation funds planning new real estate purchases of $465 million; 9 government funds planning new real estate purchases of $1,705 million; 2 funds plan to purchase real estate but failed to disclose the amount or types.*

The most likely stage of planned participation in direct real estate over the next three years will be (response based on amount of planned investments):

	1983
Raw Land	—
Development	1%
Purchase of Income Property	95%
Did Not Specify	4%

Of the 17 funds intending new direct real estate purchases, four funds plan to develop $45 million worth of property. We asked the four funds that were planning property development if they would act alone or with others.

	1983
Alone	50%
With Others	50%

Those planning to develop property with others indicated their partners as follows:

1983	
25%	Insurance Company
—	Bank
—	Investment Banker
25%	Developer
—	Independent Real Estate Management Firm
—	Broker or Realtor
25%	Pension Funds
25%	Real Estate Consultant

What do you regard as an acceptable management fee for your fund's participation in direct real estate investment utilizing an outside real estate investment counsel?

	1981[7]	1982[8]	1983[9]
½ of 1% annually of real estate under management	—	44%	N/A
¾ of 1% annually of real estate under management	36%	39%	20%
1% annually of real estate under management	39%	11%	25%
1¼% annually of real estate under management	18%	6%	—
1½% annually of real estate under management	—	—	5%
2% annually of real estate under management	7%	—	—
Fee based on annual income, not property value	N/A	N/A	15%
Other	N/A	N/A	20%
Did not answer	—	—	15%

[7]Based on 19 responses
[8]Based on 18 responses
[9]Based on 20 responses

Commingled real estate equity funds. Compared to direct equity real estate investing, commingled real estate equity funds will continue to play a lesser role in the real estate equity investing intentions of pension funds. Commingled funds represent one-third of the amount planned for real estate investment.

SEC registered real estate advisors will manage 67 percent of the new capital directed to commingled funds, most of that in closed-end funds. Closed-end funds, with fully 79 percent of the promised commingled capital, are greatly preferred over open-end funds.

This preference for closed-end funds reflects the trend toward a preference for direct participation in real estate equities. Closed-end funds offer no promise of liquidity, and the total fund size is set in advance. This is somewhat similar to a pension fund investing directly in real estate equities, using an investment manager. The main difference is that a pension fund does not participate alone but with its peers, and the risks and returns are shared among several investors.

These trends are all documented in the following charts.

Commingled ownership of real estate is distributed among different type fund sponsors and between open- and closed-end funds as follows:

	Current Ownership[10] (amount in mil.)				
Sponsor	**Open-End**	**Percent**	**Closed-End**	**Percent**	**Total**
Bank Commingled	$ 220	8%	$ 12	—	$ 232
Insurance Commingled	1,853	67%	43	2%	1,896
SEC Registered Real Estate Advisor Commingled or Limited Partnership	40	2%	580	21%	620
Totals	$2,113	77%	$653	23%	$2,748

[10]Response Group composed of: 96 corporation funds owning $2,422 million in commingled; 10 government funds owning $326 million commingled.

Planned — Next 3 Years[11]
(amount in mil.)

Sponsor	Open-End	Percent	Closed-End	Percent	Total
Bank Commingled	$ 32	3%	$ 33	3%	$ 65
Insurance Commingled	77	7%	142	13%	219
SEC Registered Real Estate Advisor Commingled or Limited Partnership	45	4%	683	63%	728
Totals	$ 154	14%	$ 858	79%	$1,012
			Not Specified	7%	76
					$1,088

[11]Response Group composed of: 44 corporation funds planning new commingled purchases of $703 million; 7 government funds planning new commingled purchases of $385 million; 1 fund did not specify the amount or type of their planned investment.

What do you regard as an acceptable management fee for your fund's participation in institutionally sponsored pool-type real estate vehicles?

	1981[12]	1982[13]	1983[14]
½ of 1% annually of real estate under management	—	19%	8%
¾ of 1% annually of real estate under management	25%	22%	20%
1% annually of real estate under management	59%	45%	54%
1¼% annually of real estate under management	15%	13%	14%
1½% annually of real estate under management	1%	1%	—
Did not answer	—	—	4%

[12]Based on 72 responses
[13]Based on 90 responses
[14]Based on 106 responses

Mortgages and real estate financing. The amount of planned investments in mortgages and real estate financing by pension funds has increased since our 1982 survey. It is estimated that at least $4 billion will be directed into real estate mortgages and financing during the next year. As can be seen in the charts that follow, most of the mortgage activity will be in conventional mortgages and mortgage securities.

Please note that the time frame of the question changed from three years to one year. A one-year time frame is more meaningful for determining investing intentions that involve an interest-rate-sensitive investment.

How do you classify the following investments:

	1983			
	Real Estate	Fixed Income	Other	Did not answer
Mortgages	18%	56%	4%	22%
Equity Participation Mortgages	49%	14%	10%	27%
Income Participation Mortgages	36%	29%	7%	28%
Mortgage Securities	11%	60%	6%	23%
Construction Loans	24%	37%	6%	33%
Sale/Lease Backs	34%	24%	10%	32%

Has your organization participated in real estate financing?

Yes	24%
No	75%
Did not answer	1%

Has your investment committee decided to participate in real estate financing during the next 12 months?

Yes	13%
No	85%
Did not answer	2%

Mortgages and Financing

Current[15] 1982	Current[15] 1983		Planned[16] 1982[17]	Planned[16] 1983[18]
$2,757 mil.	$ 5,142 mil.	Conventional Mortgages	$ 428 mil.	$ 334 mil.
$1,884 mil.	$ 553 mil.	Participation Mortgages	$ 762 mil.	$ 225 mil.
$3,899 mil.	$ 5,317 mil.	Mortgage Securities	$ 430 mil.	$ 397 mil.
$ 66 mil.	$ 215 mil.	Construction Loans	$ 330 mil.	$ 25 mil.
N/A	$ 98 mil.	Sale/Lease Backs on Corporate-Owned Property	N/A	$ 14 mil.
N/A	$ 70 mil.	Sale/Lease Backs on Non-Corporate-Owned Property	N/A	$ 15 mil.
$8,606 mil.	$11,395 mil.		$1,950 mil.	$1,010 mil.

[15]Response Group composed of: 27 corporate funds owning $419 million; 23 government, funds owning $10,976 million; 8 funds have financed real estate but did not specify the amount or type.

[16]Response Group composed of: 4 corporations planning to purchase $81 million; 12 governments planning to purchase $929 million; 16 funds will finance real estate but did not specify the amount or type.
[17]Planned purchases over 3 years.
[18]Planned purchases over the next 12 months.

6th Annual Real Estate Portfolio Manager Directory

■ The following *Pension World* Real Estate Portfolio Manager Directory lists firms that provide real estate portfolio management services for pension funds. It is not an exhaustive list, but rather identifies the firms that responded in full to *Pension World*'s questionnaire. Only those firms indicating they currently manage real estate portfolios for pension funds are included.

During June, 1983, the questionnaire was mailed to 480 firms throughout the U.S. and Canada that provide some form of real estate services. The response rate was 22 percent, with 106 of those firms—including 67 from last year's Directory—meeting the criteria.

The number of firms offering real estate portfolio management to pension fund managers still appears to be growing. Using the same criteria as last year, the 1983 Directory increased in size by 19 percent, compared to an 11 percent jump from 1981 to 1982. Similarly, about a dozen firms responded this year that they are in the process of instituting new funds or expanding their services to include pension fund clients, compared to less than half a dozen firms last year.

A wide gap still exists between the firm with the smallest amount of pension fund assets under management and the firm with the largest amount of assets. The number of pension fund clients under real estate portfolio management by any one firm ranges from one to 52,000. The smallest portfolio of pension fund real estate assets is $1.7 million; the largest is $5 billion. Nine firms are managing more than $1 billion in pension fund assets, compared to seven in the 1982 Directory.

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
ACQUEST CAPITAL MANAGEMENT CO. 505 North Woodward Avenue Suite 3850 Bloomfield Hills, MI 48013	David G. Ong President 313/645-5130	Approx. $35	10	Approx. $35
AETNA LIFE & CASUALTY CO. 151 Farmington Avenue P.O. Box 1414 Hartford, CT 06156	Thomas R. John Director 203/273-6390	$14,000	175	$1,500
ALDRICH, EASTMAN & WALTCH 1 Post Office Square Boston, MA 02109	Mark J. Waltch Principal 617/542-9300	$530 (committed)	16	$480
ALSTER INTERNATIONAL 919 Third Avenue New York, NY 10022	Henri Alster President 212/888-7966	$180	3	$180
AM CAL COMPANY 4737 Lankershim Boulevard North Hollywood, CA 91602	James B. McKenna President 213/763-6206	$250	7	$250
AMERICAN AGRICULTURAL INVESTMENT MANAGEMENT COMPANY, INC. 2603 West 22nd Street Suite 17 Oak Brook, IL 60521	H. Joseph Bourn Executive Vice President 312/654-6616	$20	3	$11
AMERICAN SUNBELT PROPERTIES 501 Park Avenue North P.O. Box 2321 Winter Park, Fl 32790	Donald M. Coller President 305/629-1085	$101	26	$35
AMERITRUST CO. P.O. Box 5937 Cleveland, OH 44101	Mark A. Albertson Vice President 216/687-5776	$10	52	$10
THE BALCOR CO. 10024 Skokie Boulevard Skokie, IL 60077	Richard Bennett Vice President—Manager Institutional Sales 312/677-2900	$2,000+	52,000	Approx. $500
BANK OF AMERICA 180 Montgomery Street P.O. Box 37026 San Francisco, CA 94137	Jack S. Cooper Vice President and Manager 415/622-1712	$380	200	$115
BANK OF BOSTON 100 Federal Street Boston, MA 02110	Peter F. Tague III First Vice President 617/434-4560	$195 (3/30/83—pooled real estate investment fund)	208 (3/30/83)	$195 (3/30/83—pooled real estate investment fund)
BANKERS LIFE CO. 711 High Street Des Moines, IA 50307	Dan J. Fitzgerrell Director, Pension Operations 515/247-6791	$4,298 (general and separate accounts)	32 (real estate separate account)	$3,000 in general account; $9.8 in real estate separate account

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Income-producing property emphasising high-tech, R&D, single- and multi-tenant office	Direct investment, limited partnership interests in commingled, closed-end fund	Primarily Michigan	$250,000	Not available	.5-1.2% of invested assets per annum
Commercial income-producing equity real estate, participating mortgages	Units in open- and closed-end equity real estate, open-end participating mortgage accts., participations in larger single-property accts.	National	$100,000 (open-end acct.), $500,000 (closed-end acct.)	Separate account—8.71% net (12 mos. ending 12/31/82); participating mortgages—16.24% net (12 mos. ending 12/31/82)	Investment management: equity real estate—1%, participating mortgage—.75%
Commercial real estate interests	Individual direct investment accounts, commingled fractional interests in real property, participation in State Street Real Estate Fund II	National	Minimum $10 million per year separate accounts: $5 million State Street Real Estate Fund II	Not reported	Single transaction fee dependent on deal structure, plus annual portfolio mgmt. fee of .5 percent.
Income-producing property	Equity ownership	East, Southeast	$10 million	Not available	Negotiated
Income-producing properties—$75 million, mortgages—$175 million	Equity ownership	National	$500,000	12.5-14%	Negotiated
Income-producing equity farmland	Closed-end group trust, direct investment	Southeast, Mississippi River Delta, Midwest, Southwest, West	$500,000	3-4%	Level fee on group trust: Acquisition fee with annual mgmt. fee on direct
Income-producing property—$30 million, mortgages—$5 million	Joint ventures, limited partnerships	Southeast, Midwest	$60,000	13% +	Varies
Income-producing property	Units in commingled equity fund	National	$100	Not reported	1.125% per annum on real estate fair market value; .3% on cash awaiting investment
Debt	Group trust, separate account, limited partnership	National	Limited partnership—$2,000; group trust—$500,000	15-17% internal rate of return	Limited partnership—share in cash flow, group trust or separate account—asset mgmt. fee
Income-producing property—95%; mortgages—5%	Commingled fund, partnerships, separate accounts	National with emphasis on Sunbelt and West	Commingled fund—$50,000; Separate Accounts—$3 million	Varies by type of participation	1% of total assets
Income-producing property	Units of pooled fund	West—22%; Midwest—22%; Northeast—22%; South—28%	None	13.1% (1982)	1% of net asset value
Income-producing property—$9.8 million; mortgages—$3,000	Units in pooled funds	National	None	Varies between mortgages and equity positions	Scale based on assets under mgmt.—less than $100,000—.84%; $100,000-$300,000—.42% of balance plus $420, etc.

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
THE BOSTON CO. REAL ESTATE COUNSEL One Boston Place Boston, MA 02106	Robert A. Radloff President 617/722-7102	$650	6	$490
R.M. BRADLEY & CO. 250 Boylston Street Boston, MA 02116	Richard P. Brown Senior Vice President 617/421-0706	$850	2 (under contract)	$275
BURNHAM REAL ESTATE INVESTMENT ADVISORS, INC. P.O. Box 2910 San Diego, CA 92112	H.D. McNee, Jr. President 609/234-1949	$15	2	$15
CALIFORNIA FEDERAL SAVINGS & LOAN ASSOCIATION 5670 Wilshire Boulevard, #890 Los Angeles, CA 90036	Shirley Burr Assistant Vice President 213/932-2638	$7,800 (loans receivable)	3	Approx. $150
CALIFORNIA PROPERTIES PENSION FUND 245 Fischer Avenue, D-1 Costa Mesa, CA 92626	Tony Rota Executive Vice President 714/751-7400	$10	170	$5
CAPITAL CONSULTANTS, INC. 2300 S.W. First Avenue Portland, OR 97201	David L. Nelsen Vice President 503/241-1200	$130	27	$119
CHASE INVESTORS MANAGEMENT CORP. 1211 Avenue of the Americas New York, NY 10036	Donald F. Ferrara Vice President 212/730-3714	Approx. $1,000 (gross assets—market value)	7	$52 (pooled fund)
CHEMICAL BANK REAL ESTATE INVESTMENT ADVISORY SERVICE 633 Third Avenue New York, NY 10017	Anne G. Shean Vice President 212/878-7623	$50	10	$50 (Real Estate Equities Fund)
CITIBANK, N.A. 153 East 53rd Street New York, NY 10043	John Kemble Vice President 212/559-1709	$3,200	70	$1,500 (gross), $800 (net)
CITIZENS & SOUTHERN NATIONAL BANK P.O. Box 4114 Atlanta, GA 30302	James R. Wood Senior Vice President 404/581-3368	$170+	16	$47
COLDWELL BANKER CAPITAL MANAGEMENT SERVICES 533 Fremont Ave. Los Angeles, CA 90071	Reid G. Samuelson First Vice President 213/613-3491	$700	40	$700
CONNECTICUT GENERAL LIFE INSURANCE COMPANY, A CIGNA COMPANY P.O. Box 2975 Hartford, CT 06104	Stephen Cordes Pension Investment Officer 203/725-2635	$5,780	62 (4/1/83)	$130

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Principally debt instruments with equity features in income-producing property	Direct investment or special purpose closed-end pools	National	$5 million initially; $10 million per year thereafter	Not available	Fee schedule available
Income-producing property—70%; mortgages—20%; joint ventures—10%	Convertible mortgages, fee ownership, joint ventures	National	$4 million	8-10%	Fee schedule available
Mortgages, equities	Direct investment	San Diego County	On individual basis	On individual basis	.5-1.5% of loan amount
Residential—70%; commercial-30%	Commercial—joint venture offerings; residential—participation sales or pooled funds	West, Southeast	$5 million	Market yields	Negotiable
Non-leveraged triple net California land leases	Shares	Southern California	250 shares	15%	Management fee based on net profit to fund
Real estate equities—25%; mortgages—75%	Based on client's objectives	Pacific Northwest	Pooled fund minimum—$50,000; mortgages—$500,000; direct—$1 million	Real estate equities—9-10% net; mortgages—currently 12%	Mortgages—¼-1% depending on portfolio size; real estate equities—1-1.25%
100% existing income-producing property (approx. ⅔ convertible mortgage, ⅓ fee ownership)	Participation in pooled fund, separate account	Primarily East and South	$1 million	9.7% cash return projected for 9/30/83 fiscal year-end	1% per annum on real estate investments at cost, 0.1% per annum on marketable securities
Income-producing property—95.5%; land—2.7%; mortgages—1.8%	Units in open-end commingled real estate fund	East—22.1%, South—52.5%; Midwest—25.4%	None	15.38% (12 mos. ending 12/31/82); 5.90% (3 mos. ending 3/31/83)	1.25% on net real estate assets, .2% on cash reserves
Income-producing property—$665 million; land—$35 million; mortgages—$100 million	Units in open-end fund, separate account	National	$2.5 million	11-15% annually	1-1.5%
Income-producing property—30%; mortgages—60%; non-income-producing property—10%	Participation in commingled open & closed-end funds, direct ownership	Southeast	Variable	Variable	Function of investment type
Income-producing property—80%; convertible mortgages—20%	Limited partnerships, direct investments	National	$1 million	Not reported	1.15% management fee plus incentive performance fee
Real Estate Separate Account (SA-R)—(includes garden-office, office-warehouse, industrial, retail, hotels, R&D)	Open-end, pooled account (SA-R), closed-end real estate fund, single-customer and limited customer closed-end accounts	National in smaller cities and outlying metro areas	SA-R—$100,000 for initial and ongoing deposits, Closed-end Real Estate Fund I—$5 million	SA-R—14.2% net asset mgmt. fees (1982), 3.19% net of asset mgmt. fees, unannualized (3 mos. ending 3/31/83)	SA-R—1% annual mgmt. fee on net assets, deducted quarterly with contract expense charge based on total pension assets under CG mgmt.; Performance mgmt. fee for closed-end fund.

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
CONNECTICUT MUTUAL LIFE INSURANCE CO. 140 Garden Street Hartford, CT 06115	Gary S. Klem Second Vice President 203/727-6632	$2,351	12	$28.5
CONSOLIDATED CAPITAL COMPANIES 1900 Powell Street Emeryville, CA 94608	Bill Mori Vice President 800/227-1870	$2,000	Approx. 4,000	Approx. $100
CONTINENTAL BANK 30 North LaSalle Street Chicago, IL 60697	Sharon Bond Vice President 312/828-3977	Approx. $400	Approx. 50	Approx. $75
COPLEY REAL ESTATE ADVISORS, INC. 535 Boylston Street Boston, MA 02116	Kevin M. Mahony Vice President 617/578-4905	$2,100+	100+	$950
CORPORATE PROPERTY INVESTORS 230 Park Avenue New York, NY 10169	Hans C. Mautner President 212/725-2150	$2,225	25	Approx. $1,112
CROCKER REAL ESTATE INVESTMENT GROUP 44 Montgomery Street Suite 2110 San Francisco, CA 94104	John H. Dracott Vice President 415/477-3318	$170 (3/31/83)	230+ (3/31/83)	$143
DIVERSIFIED HOLDINGS CORP. 475 Park Avenue South New York, NY 10048	Peter B. Daenzer President 212/684-7979	$250	25	$20
EAGLE MANAGEMENT REALTY TRUST 2001 Kirby Suite 1200 Houston, TX 77019	W.E. Penland Principal and Director 713/526-8870	$25-30 (when closed)	5-6 (when closed)	$25-30 (when closed)
EASTDIL ADVISERS, INC. 40 West 57th Street New York, NY 10019	James J. Gallagher President 212/977-4505	$650	3	$600
RICHARD ELLIS, INC. 200 East Randolph Drive Suite 6545 Chicago, IL 60601	Bradley A. Olsen Senior Vice President 312/861-1105	$750	6	$650

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Fixed and participating mortgages—$1,966 million, income-producing property and joint venture interests—$385 million	Pooled and individual client fund mgmt.	National—pooled account distribution is West—24%, South—28%, Midwest—18%, Southwest—16%, Northwest—14%	$50,000	15.7% (1981); 6.5% (1982)	1% of net assets
Substantially all in participating mortgages	Participating mortgages	National with emphasis on Southwest and Southeast	$5,000	9-10% basic interest, plus participating mortgage feature	One-time sales commission from 1.6-8.9% depending, on size of the investment, plus 1% of cash flow
Income-producing property, mortgages	Equity	National	No minimum	Varies by participation	Negotiable
Income-producing property—$875 million, undeveloped land—$75 million	Open- and closed-end commingled funds	National	Open—$100,000; Closed—$5 million	Open—29.85% (last 12 mos.); closed—NA	1.25% net real estate assets plus .25% non-real estate assets
Income-producing property—$1,565 million, options to purchase property and related notes receivable—$500 million, net-leased properties—$102 million, other—$58 million	Shares in real estate investment trust	National	$5 million	Varies	None
Crocker Real Estate Investment Group (CREEF): income-producing office, industrial & retail property. Sep. accts.: development projects to income-producing off., indus., and retail properties.	Fund: units; separate account: participation	National with emphasis on West and Southwest	No minimum in CREEF	CREEF annual performance—9.57% (1982)	CREEF: 1.2%; Separate account: acquisition, 1-1.75%; property mgmt. 0.5% of asset value; disposition, 1% of sale price
Income-producing property	Equity, debt, or combination	Continental U.S.	$100,000	Varies by participation	Negotiable
Income-producing property (45% office, 45% retail, 10% industrial)	Equity	Southwest	$2 million	Not available	1.2% of asset value paid monthly
Income-producing property—95%; mortgages—5%	Direct ownership, separate account	Major metro areas and California	$15	No minimum	1% of net asset value
income-producing property—$555 million; forward commitment to acquire property under construction—$95 million	Direct, closed-end commingled fund	National	Closed-end fund—$10 million	Varies	1% of fair market value of real estate investments

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
EQUITABLE LIFE ASSURANCE SOCIETY OF THE U.S. 1285 Avenue of the Americas New York, NY 10019	Joyce Frater Product Manager/Assistant Vice President 212/554-4213	$18,302 (gross) *	298 (3/31/83)	$2,672 (gross)
EQUITEC INSTITUTIONAL REALTY ADVISORS 7677 Oakport Street Oakland, CA 94614	Ronald E. Silva Director 415/430-9900	$500	4	$30
EQUITY PROGRAMS INVESTMENT CORP. 8201 Leesburg Pike Falls Church, VA 22041	Joel H. Bernstein Senior Vice President/ Marketing 703/931-7600	$700	Approx. 100	$45
FIRST ASSET REALTY ADVISORS First Bank Place Minneapolis, MN 55416	Charles F. Glaman President 612/370-4601	$21 (3/31/82)	4	$18 (3/31/82)
FIRST CAPITAL FINANCIAL CORP. 3195 Ponce De Leon Boulevard Coral Gables, FL 33134	Richard Schwartz Executive Vice President 305/442-0200	$400	8,700	$160
FIRST NATIONAL BANK OF ATLANTA P.O. Box 4148 Atlanta, GA 30302	Charles M. Tarver Vice President 404/588-6829	$113	22	$45
THE FIRST NATIONAL BANK OF CHICAGO Three First National Plaza Suite 0106 Chicago, IL 60670	J. William Baker Vice President 312/732-7641	$800	100	$500
THE FIRST NATIONAL BANK OF FORT WORTH Two Burnett Plaza—18th Floor 801 Cherry Street Fort Worth, TX 76102	Gerald Hartman, Jr. Vice President and Trust Officer 817/390-6996	$157	90	$45
FIRST WISCONSIN TRUST CO. 777 East Wisconsin Avenue P.O. Box 2054 Milwaukee, WI 53201	Earl D. Lillydahl Vice President 414/765-4844	$25	10	$1.7 (additional standby commitment of $1 million)
GOLDMAN, SACHS & CO. 85 Broad Street New York, NY 10004	Meyer Melnikoff Actuary 212/902-5649	Approx. $100	5	Approx. $100
THE GREAT-WEST LIFE ASSURANCE CO. 100 Osborne Street North Winnipeg, Manitoba, Canada R3C 3A5	Gary N. Coopland Director, Pension Investments 204/946-7342	$2,000+	100	$215
GROUP ONE INVESTMENTS 77 West Washington Street Suite 1005 Chicago, IL 60602	Robert H. Weitzman Finance/Investment Partner 312/346-3434	$100+	75	$25+

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Wholly owned—$1,793. million, mortgages—$92.2 million, construction loans—$197.9, equity partnership—$284.6 million, option to purchase—$26.7 million.	Units in separate accounts	SA 8: South—35% Central—18%; West—20.4%; Mid-Atlantic—9.6%; Northeast—17%	$1 million	Not reported	Varies. Available upon request.
Income-producing property	Shares in closed-end fund	National	$1 million	Projected to be 10-15% real return	.5% of acquisition fee, 1.5% of r. e. assets under mgmt. (annual asset mgmt. fee), 5% profit partic. after return of capital invested plus 10% comp. rate of return annually over holding period
Income-producing property	Commingled trust, partnership offerings	National	$100,000	15%	Markup, advisory, cash-end split
Income-producing property	Open-end fund	South—28.6%; Midwest—31.4%; West—12.5% (remainder cash)	$500,000	Year ending 3/31/82—9.9%	1.25% of net asset value annually, .5% each month
Income-producing property	Limited partnership	Sunbelt	$2,000	14.6%	Available upon request
Timberland—$23 million; mortgages—$13 million; income real estate—$9 million	Direct investments, pooled investments in timberland	Southeast	$250,000	Varies with investment objectives	Pooled timberland—1.2% of asset value on timberland, .25% on cash equivalents; other fees variable
Income-producing property—98%; undeveloped land—2%	Commingled funds, straight equity	West—35%; South—25%; Midwest—30%; East—10%	$1 million	11.1% (1982)	1.2% of value of real estate
Mortgages—25%; real estate holdings—75%	Individual ownership, pooled funds, joint ventures	National with emphasis in Texas	Criteria varies by participation	Varies by type of investment	Varies by participation—fee schedule furnished upon request
Nonleveraged nonresidential income property	Open-end commingled fund	Midwest	$25,000	13% (estimated)	1.5% on real estate assets and .25% on liquid assets
Existing income-producing, commercial property	Commingled and separate accounts investing through direct ownership, partnerships, participating and convertible debt	National	$1 million	Varies-approx. 7-9%	1.25% of net assets at market value; decramental fee structure is used for investments over $100 million
Income-producing property	Units of a segregated fund account	Canada	Not reported	14.03% (12 mos. ending 12/81); 13.14% (12 mos. ending 12/82)	Varies. Available upon request.
Income-producing property	Limited partnership interests, joint ventures, fee ownership	National	Flexible	Varies by type of investment	Negotiable

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
GRUBB & ELLIS COMPANY 1333 Broadway Oakland, CA 94612	Terry P. Noyer Senior Vice President 415/839-9600	$125 (sep. acct.) $105 (commingled)	4	$125
JOHN HANCOCK MUTUAL LIFE INSURANCE COMPANY P.O. Box 111 Boston, MA 02117	Michael B. O'Toole Vice President-Group Pension Sales 617/421-6168	$8,287	85	$766.2
HARRIS TRUST & SAVINGS BANK 111 West Monroe Street, 6C Chicago, IL 60603	John K. Rutledge Vice President 312/461-6346	$63	85	$6
INTEGRATED RESOURCES 666 Third Avenue New York, NY 10017	Joel M. Pashcow Executive Vice President 212/551-6000	$4,000	Approx. 1,400	$66.6
INTERFIRST BANK DALLAS, N.A. Box 83794 Dallas, TX 75283	Nathan O. Finke Vice President 214/573-4650	$600	73	$320
JMB INSTITUTIONAL REALTY 875 North Michigan Avenue Suite 3900 Chicago, IL 60611	John S. Lillard President 312/440-5042	$3,800	43	$490
JONES LANG WOOTON REALTY ADVISORS 499 Park Avenue New York, NY 10022	John A. Weisz President 212/688-8181	$700	6	$350
THOMAS L. KARSTEN ASSOCIATES (Subsidiary of First Interstate Bancorp) 10960 Wilshire Boulevard Suite 2232 Los Angeles, CA 90024	A. Redmond Doms, Jr. Executive Vice President 213/477-2481	$145	5	$145
THE KOLL COMPANY 4490 Von Karman Avenue Newport Beach, CA 92660	David P. Middlemas Executive Vice President 714/833-3030	$800	3	$50
LANDAUER ADVISORS, INC. 200 Park Avenue New York, NY 10166	Patrick J. Callan President 212/687-2323	$830	8	$655

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Equity, mortgages (convertible and participating)	Closed-end commingled fund, separate account	National	$1 million	14.8% (1982)	Separate account—various, commingled—1% of asset mgmt.
ERA—$566.9 million; ACRE—equity $11.1 million, equity-related mortgage $4.6 million, conventional mortgage $5.5 million	Units in ERA, ACRE, SERA-1	ERA—East—27%, South—28%, Midwest—21%, West—28%; ACRE—East—11%, South—15%, Midwest—55%, West—19%	$250,000	ERA—8.8% (gross 12/31/82); ACRE—20.2% (gross 12/31/82)	ERA—1% annually, charged quarterly on net assets; ACRE—1% equity, .75% equity related mortgage, .5% conventional mortgage, all deducted monthly
Income-producing commercial equities	Units in collective investment fund, direct investment	National	$1,000 for collective fund, $2 million direct	(New fund)	Each account subject to graduated fee; real estate fund charged additional .75%
Mortgages—$63.2 million; short-term investments—$3.6 million	Common stock in Resources Pension Shares, Inc., shares of beneficial interest in Resources Pension Shares 2, REIT's with dividend reinvestment plan	National	$1,000 in most states	Estimated IRR without dividend reinvestment: RPS, Inc.—15.3%, RPS 2—12.5%	Offering, acquisition, operation, liquidation fee schedule available
Office buildings—60%; warehouses—10%; retail facilities—20%; mortgages—10%	Open-end fund, closed-end funds, separate account	Southwest	$25,000	12.1 (pooled fund, year-end 1982)	1% of market value per annum
Income-producing property, including equity and equity-oriented mortgages in office, retail, industrial, and multi-family residential	Equity participation	Northeast—14%; South—28%; Southwest—19%; Midwest—28%; West—9%	$500,000 in commingled funds; $100 million for separate account	14.47%—2-year compounded annually	Fee schedule available upon request
Income-producing property	Separate accounts	National	$100 million over 2-3 yrs.	Not reported	Varies with services provided
Income-producing property	Direct investments, equity, joint venture, units in a closed-end commingled fund	National with emphasis on growth areas	$3 million	Varies	Negotiable, dependent services required
Income-producing property	Direct equity involvement, leasehold positions, and joint venture positions	West Coast, primarily California, Arizona, Oregon, and Washington	$5 million	25% + (including appreciation)	Tied to participation—either in form of direct equity ownership or by use of a basic mgmt. fee, including participation in cash flow increases.
Equity ownership of office buildings, shopping centers, and warehouse parks	Equity ownership of real estate through direct investment or participation in closed-end group trusts	Continental U.S.	Closed-end group trust—$5 million	Varies	Closed-end group trust—1.25% annually of contributions during years 1-5, 1% annually of appraised net asset value years 6-10; direct separate accounts—negotiated.

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
THE LANDSING CORPORATION 800 El Camino Real Menlo Park, CA 94025	Ronald D. Roberts Vice President 415/321-7100 or 800/227-7334	$350	7,000	$160
LANDVEST, INC. 14 Kilby Street Boston, MA 02109	John Coburn, Jr. Vice President 617/723-1800	$15	3	$4
LASALLE ADVISORS, INC. 11 South LaSalle Street Chicago, IL 60603	Stanislaw Maliszewski Vice President 312/782-5800	$1,600	Approx. 20	$630
LEHNDORFF & BABSON REAL ESTATE COUNSEL, INC. 2501 Cedar Springs, #340 Dallas, TX 75201	Robert M. Angland Executive Vice President 617/723-7540	$1,300	8	$180
LIEBERMAN COMPANIES 554 Middle Neck Road Great Neck, NY 11023	Bruce R. Lieberman President 516/466-6565	$30	2	$2
LINCOLN NATIONAL PENSION P.O. Box 1110 Fort Wayne, IN 46801	Ernest Fair Assistant Vice President 219/427-2407	$1,500	1	$7.5
LOEB PARTNERS REALTY 521 Fifth Avenue New York, NY 10175	Gary L. Naughton Vice President 212/883-0371	$500	2	$75
MASSACHUSETTS MUTUAL LIFE INSURANCE CO. 1295 State Street Springfield, MA 01111	Peter J. Vogian Vice President 413/788-8411	$3,200	47	$37.2
JOHN MCMAHAN ASSOCIATES, INC. 201 California Street Suite 400 San Francisco, CA 94111	John McMahan President 415/433-7770	$91	4	$51
MELLON FINANCIAL SERVICES 551 Madison Avenue New York, NY 10022	Karin E. Shewer Vice President 212/702-4040	$450	6	$450
MERCANTILE TRUST CO. P.O. Box 387 St. Louis, MO 63166	Arthur C. Jones Vice President 314/425-2735	$47	8	$47
MERRILL LYNCH, HUBBARD INC. Two Broadway New York, NY 10004	Anthony T. Niosi Vice President 212/908-8496	$500+	Approx. 4,000 limited partners	$240+

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Income-producing property, including garden apartment communities, shopping centers, office, industrial	Units in closed-end equity trusts, participating debt, convertible debt, and fee ownership (joint ventures)	West and Southwest	$5,000	Approx. 15-20%	Negotiable
Productive timberland	Direct investment	Primarily Northeast, some South	$1 million	3-7% real return	Negotiable
Income-producing property	Units in commingled funds, direct individual accounts	National	$5 million	Not reported	1.25% of net real estate assets
Income-producing property	Commingled trust and direct separate accounts	South—49.1%; West—36.5%; Midwest—11.6%; East—2.8%	$1 million	22.9% on completed transactions (1971-1982)	1.25% on commingled fund real estate assets; direct investment mgmt. fees negotiable
Income-producing property, mortgages	Flexible to suit needs of investor	Southeast, Southwest	$500,000	Varies	Negotiable
Income-producing property	Joint ventures	National	$250,000	10-14%	Fee schedule available upon request
Income-producing property	Direct investment	National	$1 million	Varies	Negotiable
Income-producing property—73.3%; short-term investments—26.7%	Units in open-end commingled fund	Northeast—20%; Southwest—22%; Midwest—15%; Southeast—28%; Rocky Mountain—15%	$250,000	12.1% (1982)	1% of market value on annual basis
Income-producing property	Pooled fund, separate account	West, Southwest, Southeast	$2 million	6-8% real return	Pooled—1.2% of assets managed; separate—acquisition fee: 2-3%, portfolio management: .5% annually
Equity—$200 million; debt—$250 million	Direct investment	National	$10 million ($5 million for debt only)	Not available	Negotiated
Income producing—75%; convertible mortgages—25%	Units of participation	Southeast—8%; South—58%; Midwest—28%; West—6%	$25,000	Varies; 11.1% (12 mos. ending 3/1/83)	1% of net real estate assets plus .25% on short-term investments
Commercial-62%; residential—39%; agricultural—1%	Closed-end commingled fund, limited partnership, direct investment	Mostly Sunbelt; Florida, North Carolina, Texas, Arizona, Colorado, Southern California	$1 million for direct investment	Varies by investment	General partner fees subordinated to a minimum cumulative return to limited partners

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
METROPOLITAN LIFE INSURANCE CO. One Madison Avenue New York, NY 10010	John E. Emmanuel Assistant Vice President 212/578-7447	$17,785	25	$316 (includes $48 million of closed-end Series I committed funds as of 5/31/83)
MORGAN GUARANTY TRUST CO. 9 West 57th Street New York, NY 10019	Rohit M. Desai Senior Vice President 212/826-7302	$1,177	4 (separate account) 192 (commingled)	$626
MORGUARD INVESTMENT LTD. 1027 Younge Street Toronto, Ontario, Canada M4W 3E8	W.A. Houghton Senior Vice President/ Investments 416/964-2811	Approx. $1,100	32	Approx. $1,100
MORGUARD REALTY ADVISORS, INC. 910 Fifth Avenue Seattle, WA 98104	Chandler H. Everett Vice President 206/623-1650	$56	7	$15.3
MUTUAL OF NEW YORK (MONY) 1740 Broadway New York, NY 10019	Phillip N. Maisano Division Vice President 212/708-2600	$350	25	$14.5
NEW ENGLAND MUTUAL LIFE INSURANCE CO. 8 New England Executive Park Burlington, MA 01803	Charles J. Golden, Jr. Assistant Vice President 617/578-5468	Approx. $2,000	32+	$25
NEW YORK LIFE INSURANCE CO. 51 Madison Avenue Room 850 New York, NY 10010	Thomas J. Connolly Pension Vice President 212/576-3832	$28.4	8	$28.4
NORTH AMERICAN LIFE ASSURANCE CO. 105 Adelaide Street West Toronto, Ontario, Canada M5H 1V1	George Svec Associate Treasurer 416/365-8314	$30	56	$30
NORTH CAROLINA NATIONAL BANK One North Carolina National Bank Plaza Charlotte, NC 28255	Robert L. Reynolds Vice President 704/374-8379	$210	350	$210
PACIFIC MUTUAL REALTY 700 Newport Center Drive Newport Beach, CA 92660	Neal A. Randle Vice President 714/640-3000	$310	3	Approx. $50
PACIFIC REALTY ADVISORS 44 Montgomery Street Suite 4230 San Francisco, CA 94104	James O. Goldsmith President 415/392-3665	Approx. $85 (gross)	2	Approx. $15

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Equity/joint ventures—$92.5 million; undeveloped land—$500,000, equity/non-joint ventures—$76.9 million; mortgage loans— $74.5 million; cash and short-term—$23.5 million	Equity ownership, joint ventures, participating mortgages, construction and development loans, land sales, and leasebacks	East, Southeast, West, Southwest, Central U.S.	$100,000 from new clients; $25,000 from existing clients	Account RE—7.2%; Tower Fund—8.8%	Separate account RE and Tower Fund—1% of net assets; closed-end series—1.25% of net assets
Direct ownership of income-producing property—67%; investments in REIT's 15%; share holdings in real estate companies—13%; fixed income securities—5%	Commingled fund, separate accounts	East—51%; South—25%; Midwest—14%; West—10%	$1 million	22.1% (1982)	On gross asset value: 1%—first $75 million, .8% next $75 million, .6% next $100 million, .5% thereafter
Real estate—$1.1 billion; mortgages—$2.6 billion	Ownership through tax-exempt vehicle	Major Canadian centers	$1 million	Varies	Available on request by investor
Income-producing property—$6 million; land held for development—$9 million	Direct equity, pooled equity in group trust vehicle	West, Southwest	$1 million	Proprietary	Tax-exempt pooled vehicle—1.2% first year, 1% thereafter; direct equity accounts—negotiated
Income-producing property	Units in open-end fund	East, South, West, Central	$100,000	15.36% (1982)	1% mean assets
Income-producing property	Development property account equity ownership, joint ventures in equity real estate	National	$100,000	30% (12 mos. ending 3/31/83—first full year of operation)	Net real estate assets—1.25%, cash reserves—$2,000 first year, $1,000 subsequent years
Income-producing property	100% ownership	National	$100,000	8.7% (total return 1981)	1% of net assets of account collected monthly, plus annual administrative fee
Income-producing property	Pooled fund units	Across Canada	No minimum	13.3% (1982)	Basic mgmt. fee, plus .78% charge on real estate fund
Income-producing property—70%; raw land—10%; cash—20%	Open-end, closed-end, direct ownership	Southeast, South	$500,000	13.9% (1982); 13% (last five years)	1.2% on assets
Income-producing property	Closed-end equity real estate funds	National with emphasis on West	$1 million	Available on request	First two years—1.25% of cost of net invested assets, after year 2—1% of market value of net invested assets
Income-producing property	Equity ownership, debt, mixed hybrids	West Coast	$2 million	Varies	Negotiable

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
PAINE WEBBER PROPERTIES 100 Federal Street Boston, MA 02101	George H. Bigelow Senior Vice President 617/423-8150	$400	8,000	$100
VICTOR PALMIERI AND COMPANY INC. 2021 K Street, NW Suite 700 Washington, DC 20006	John A. Koskinen President 202/223-8690	$900	8	$700
THE PECKHAM BOSTON CO. Four Longfellow Place Boston, MA 02114	John M. Peckham III President 617/523-4440	$18	4	$18
THE PHILADELPHIA SAVING FUND SOCIETY 1234 Market Street Philadelphia, PA 19107	A.T. Winner, Jr. Sr. V.P./Residential Investments E.W. Schmid, Jr. Asst. V.P./Income Loan Investments 215/636-6000	$400	1	$400
PHOENIX MUTUAL LIFE INSURANCE CO. One American Row Hartford, CT 06115	Joel C. Cohan Vice President 203/278-1212	$1,000	10	$35
PROPERTY CAPITAL ADVISORS, INC. 200 Clarendon Street Boston, MA 02116	John A. Cervieri, Jr. President 617/536-8600	$500+	25+	$250+
THE PRUDENTIAL INSURANCE CO. OF AMERICA 19 Prudential Plaza Newark, NJ 07107	James H. Gately Vice President 201/877-3735	$22,977 (3/31/83) (of this amount $17,955 represents our general account real estate assets)	410 (3/31/83)	$5,022 (3/31/83)
PUBLIC STORAGE, INC. 990 South Fair Oaks P.O. Box 600 Pasadena, CA 91109	Paul D. Quadros Senior Vice President 213/682-3601	$420	10,000	$150
REPUBLICBANK DALLAS P.O. Box 241 Dallas, TX 75221	David J. Pittman Vice President and Trust Officer 214/653-6506	$270	23	$52
RHODE ISLAND HOSPITAL TRUST NATIONAL BANK One Hospital Trust Plaza Providence, RI 02903	Dan A. Woolley Vice President—Director of Real Estate Investment 401/278-7606	$5.3	12	$5.3
ROSEN ASSOCIATES 333 Jericho Turnpike Jericho, NY 11753	Robert A. Rosen President 516/822-5350	$300	6	$100+

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Mortgages with participations in asset appreciation and cash flow	Partnership units for small accounts, direct investment advisory for over $10 million	National	Public funds—$5,000; direct investment—$10 million	Varies	Varies by fund
Income-producing property—$140 million; mortgages—$530 million; undeveloped land—$30 million	Interests in closed-end funds	U.S. and Canada	$1 million	Preferred cash returns of 8-10%	1% of assets managed
Income-producing property	Direct ownership	National	$3 million	Dependent on risk	Negotiable
Primarily residential income properties under commitment	Separate account, participating mortgages	Residential—Pennsylvania, Income Loan—National	Income Loan—$1 million, Residential—no minimum	Varies on a case basis	Negotiated
Income-producing property	Units in pooled account	National	$50,000	14%	1%; graded down on deposits over $1 million
Income-producing property	Varies with property	Continental U.S.	$2 million +	10.5-11% initial returns	Based upon net cash flow of investment
Properties, net partnership—$4,222 million, mortgages/ mortgage loans—$243.8 million, shares of beneficial interest—$105.4 million, short-term investments—$183.3 million, other—$58.6 million.	Units in PRISA, PRISA II, PRIMOR, MORISA	National	PRISA—$150,000, PRISA II—$1 million	PRISA: 1.6% (quarter ending 3/31/83), 4.1% (year ending 3/31/83); PRISA II: 5.7% (quarter ending 3/31/83), 14.3% (year ending 3/31/83); PRIMOR: 2.6% (12/31/82-3/31/83): MORISA: 2.6% (12/31/82-3/31/83)	Varies. Available upon request.
Income-producing property, participating mortgages	Units in closed-end funds, joint ventures	National with emphasis on West and South	$2,500 in closed-end, $5 million-joint ventures	15-20%	Public program—8.10% of net cash flow, 15-25% of appreciation
Income-producing property	Units or direct investment properties in open-end commingled fund	Southwest, Southeast	Individual plan must have capacity to grow to $1 million participation	Varies with specific investment	1.2% of market value
Income-producing property	Unit investment in real estate fund	Northeast, Midwest	$10,000	15.7% (calendar year 1982)	1.125% of net real estate assets annually
Income-producing property	Equity, mortgages	National	$10,000	Variable	Negotiable

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
THE RREEF FUNDS 650 California Street Suite 1800 San Francisco, CA 94108	Paul Sack Principal 415/781-3300	$1,500	47	$1,500
SCHRODER REAL ESTATE CORP. One State Street New York, NY 10004	Charles Grossman President 212/269-6500	$800	75 (includes unit holders in commingled funds)	$800
SCUDDER REALTY ADVISORS, INC. 333 South Hope Street 37th Floor Los Angeles, CA 90071	Christopher B. Davis Vice President 213/628-1144	$650	15	$650
SEATTLE-FIRST NATIONAL BANK 1001 Fourth Avenue P.O. Box 3586 EXB-16 Seattle, WA 98124	Melvin I. Brady Assistant Vice President & Senior Real Estate Investment Officer 206/583-7343	$226	5	$33
SMITH, BARNEY REAL ESTATE CORP. 1345 Avenue of the Americas New York, NY 10105	Lewis W. Kresch First Vice President 212/399-6505	$290	85	$50
THE STANDARD LIFE ASSURANCE CO. 1245 Sherbrooke Street West Montreal, Quebec, Canada H3G 1G3	E.G. Burrows Vice President/Property Investment 514/284-6852	$400	80	$155
STATE STREET BANK & TRUST CO. Asset Management Division 225 Franklin Street Boston, MA 02110	Henry Sterling, Jr. Vice President Robert E. Kilroy Assistant Vice President 617/786-3232	$50	5	$24
SUHRCO REAL ESTATE ADVISORS 1818 West Lake Avenue North Suite 408 Seattle, WA 98109	Edwin C. Suhrbier President 206/284-8474	$24	1	$18
RALPH C. SUTRO CO. 4900 Wilshire Boulevard Los Angeles, CA 90010	S.Q. DellaGrotta Vice President 213/937-4000	$2,000 (institutional investors) $4,500 total servicing portfolio	38	$400
THIRD NATIONAL BANK Trust Division 201 Fourth Avenue North Nashville, TN 37244	Robert N. Power Vice Presdient and Trust Real Estate Officer 615/748-4610	$70	45	$15
THE TRAVELERS INSURANCE CO. One Tower Square Hartford, CT 06115	Peter Zummo National Account Representative 203/277-0271	$8,203.3 (3/31/83)	104 (3/31/83)	$4,271.3 (3/31/83)
TRUST COMPANY OF THE WEST REALTY ADVISORS 800 West Sixth Street Los Angeles, CA 90017	Vincent F. Martin Managing Partner 213/485-9500	$250	25	Approx. $250

Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
RREEF purchases only fully developed properties; properties acquired—$1,236 million, to be invested—$264 million	Series of closed-end commingled real estate funds	Major metro areas with populations in excess of 1 million	West and Mid-America series—$1 million; USA series—$15 million	Not reported	Percentage of assets under mgmt. paid on monthly basis
Income-producing property	Flexible	National	$25 million	15-17%	Negotiable
Residential mortgages—$200+ million; commercial real estate—$450+ million	Land sale/leaseback-leasehold mortgage with participation in increasing income plus appreciation	National with emphasis on Southwest and California	$2-3 million	14-16 percent IRR over 10 years	2 percent application fee earned by our client upon commitment, Scudder Realty is paid only by our client
Income-producing property	Open to qualified employee benefit plans, including employee-choice plans	Northwest	$20,000	15.5%	1% per year charge monthly on the gross asset value of the fund
Income-producing property	Units of participation in closed-end commingled pooled fund	Major metro areas in U.S.	Fund I closed to new investors; Fund II currently accepting minimum investments of $5 million	Not available	Varies. Available upon request.
Income-producing property—100%; mortgages—2%; unleveraged equity—98%	Units in commingled open-end fund	East—64%; South—12%; Midwest—24%	$250,000	19.5% (5-year); 16.2% (1-year)	Varies. Available upon request.
Income-producing property	Units in pooled real estate fund, undivided share in property	Canada	Not reported	Varies	Depends on size of fund managed
Income-producing property	Units in closed-end commingled pool	Northwest (Washington, Oregon, Alaska)	$100,000	Not available—fund	1.25-1.75% of net asset value of fund
Income-producing property—$125 million; mortgages—$275 million	Equity ownership	National	500,000	11-13%	Negotiated
Income-producing property	Units in open-end pooled fund	Southeast	$100,000	10%	1% of market value per year
Income-producing property—$574.0 million; mortgages—$3,697.3 million	Open- and closed-end funds	National	SA-R—$100,000, SA-T—$1 million, SA CREA—$1 million	SA-R (equity)—6.89%; SA-R (debt)—28.08%; SA-R (bal)—13.77%; SA-T—9.2% (8/25/82-3/31/83) unannualized)	SA-R—1% flat all inclusive fee; SA-T, SA CREA—1.25% flat all inclusive fee
Income-producing property	Whole or partial interest above 51%, forward purchase, equity equivalent loans	National	$5 million	Target is 8% real	Combination of annual mgmt. fee based on cost of assets plus incentive fee based on actual performance

Name and address	Person to contact, phone	Total assets under real estate portfolio management (millions)	Number of pension fund real estate clients	Total pension fund real estate assets under portfolio management (millions)
UNITED BANK OF DENVER Trust Real Estate P.O. Box 5247 Denver, CO 80217	Kenton L. Ownbey Manager—Trust Real Estate 303/863-6396	$35 (includes mortgages)	20	$3
UNITED TRUST FUND 4770 Biscayne Boulevard Suite 1050 Miami, FL 33137	James Nolan Executive Vice President 305/576-7711	$95-100	35	$95-100
WACHOVIA BANK & TRUST CO., N.A. P.O. Box 3099 Winston-Salem, NC 27102	Nicholas L. Verano III Vice President 919/748-5906	$400	Approx. 300	$366
WELLS FARGO REALTY ADVISORS 600 Montgomery Street 29th Floor San Francisco, CA 94111	J. Michael Johnson Vice President, Director of Capital Acquisition 415/396-5232	$1,350	200+	$180

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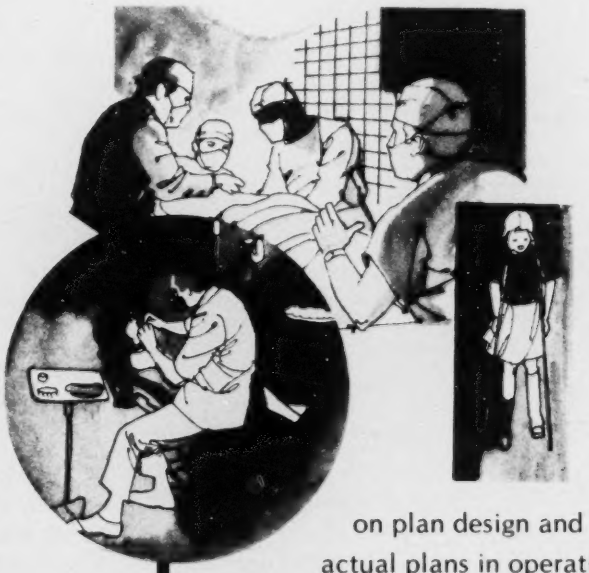
Breakdown of assets into real estate holdings	Participation offered	Geographical diversification	Minimum investment	Return on investment (net of fee)	Fee
Income-producing—assets now being invested in collective real estate fund, mortgages, and other—$1 million	Units of participation in collective fund	Colorado	$10,000	Not yet determined	1% of market value
Income-producing property	Direct	National	$5 million	7%-14% variable	Negotiated as per service
Income-producing property—$306 million; mortgages—$1.5 million; undeveloped land—$56 million; marketable assets—$2.5 million	Open-end commingled fund; corporate plans with extensive assets available for real estate investments, properties, and portfolios structured to meet specific objectives	Major metro areas of U.S.	$100,000	10.5% (12-month return as of 3/31/83)	Annual fund adm. fee—1.125% of total mkt. value of real estate investments, plus short-term investment fee. Mortgages, sales, leasebacks, cash—.25% annually, charged mthly. against account
Income-producing office, industrial, and retail properties through direct ownership or equity-oriented mortgages	Commingled funds (both open- and closed-end), separately managed portfolios	West, Sunbelt	$1 million	14.5% (3-years ending 12/31/82)	1.25% of net assets



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OCTOBER 1983

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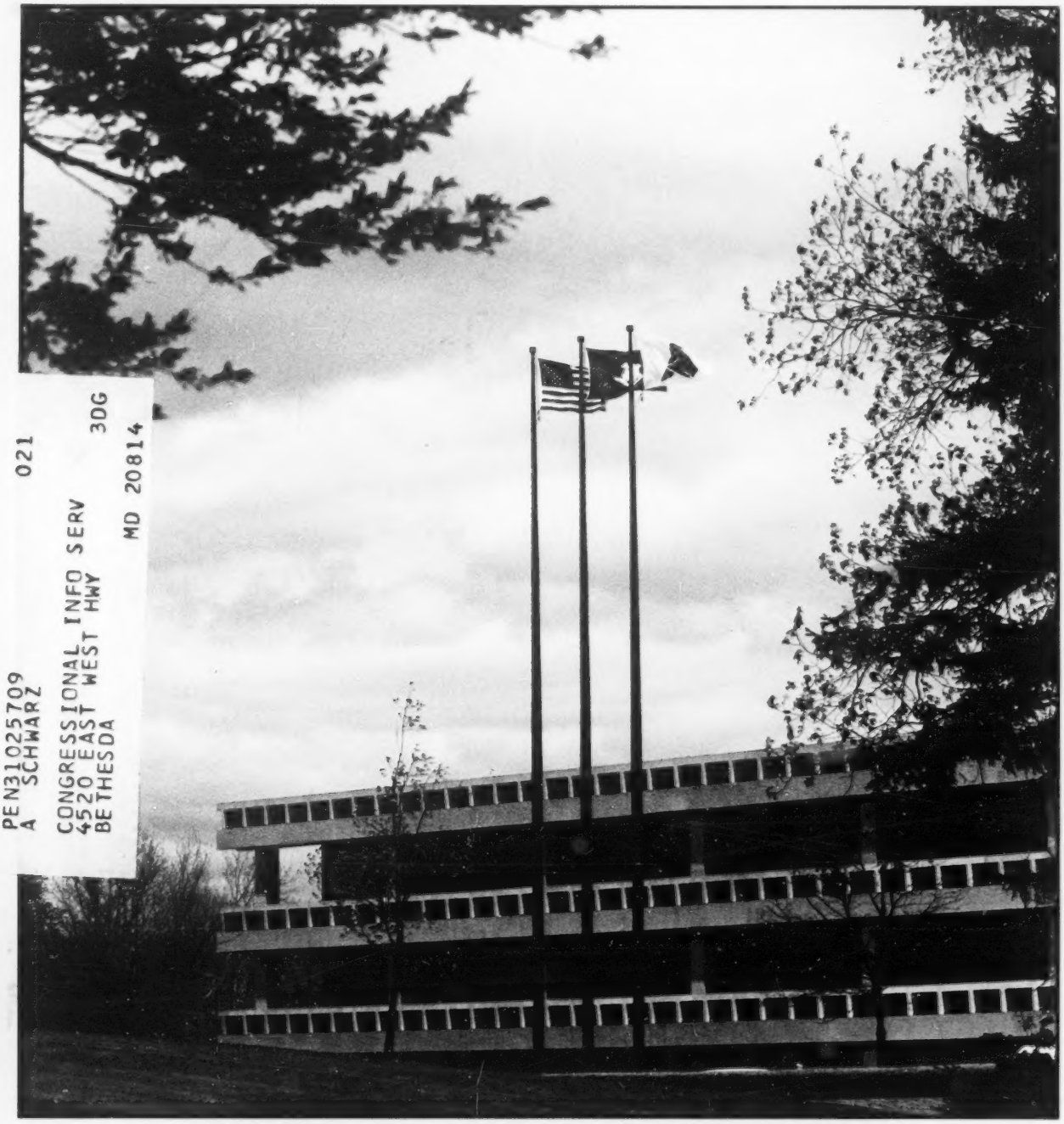

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American Can's $1-billion Fund

IRA's: The First "Universal" Year

Evaluating Oil and Gas Investment

Pension World

October 1983
Volume 19 Number 10

The Magazine for Plan Sponsors and Investment Managers/A Publication of Communication Channels, Inc.

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Plan Sponsor Focus: American Can: Managing its fund for the long run by Ronald Derven **15**
Company executives at American Can have devised a system to achieve positive results from their pension funds in up and down years alike. This article takes a look at their methods and what they have achieved.

Evaluation: IRA's: The first "universal" year by Dallas L. Salisbury **19**
The executive director of the Employee Benefit Research Institute assesses the 1982 experience of IRA's, particularly the impact of ERTA on participation in IRA's, after one full tax year of availability.

Investment: Evaluating oil and gas as an alternative investment by Mark J. Soich **23**
Although investment in oil and gas interests are viewed by many as a "wildcat" drilling risk, they have proven to be a viable equity investment with high real rates of return.

Plan Administration: Good administration needed for employee satisfaction by Ronald J. Rakowski **27**
This article examines the problems faced by Great Northern Nekoosa Corporation in its attempt to build and improve its savings/thrift plan administration and how these problems were solved.

Political Analysis: Assessing retirement program tax expenditures by Dallas Salisbury and Sylvester J. Schieber **33**
The tax code does not include a definition of the "normal structure" of the tax system. Since tax expenditures are defined as "exceptions to the normal structure," this often presents an inconsistency in interpretation.

Current Issues in Plan Design: A new old system of reimbursement by Cynthia K. Hosay **36**
DRG's, diagnostic-related groups, the new name on the health care scene, has long been considered as a form of prospective reimbursement for hospitals. Although catering only to Medicare patients at the present, DRG's future may soon include benefits for the working population.

Pension World Basics: New era of tax-effective employee contributions by Arthur B. Kagen **55**
ERTA and TEFRA offer employees more opportunity to make tax-effective individual contributions to retirement plans. Although there are limits and restrictions, plan sponsors are finding advantageous ways of making these opportunities available.

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Cover: **Surrounded by wooded lots, American Can's impressive building compliments the accomplishments in the pension field achieved by the members of this corporation. A look at how the company's pension assets are managed and invested begins on page 15.**

Cover photo: ©1983 J. Alexanders/Black Star

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IRA's: The first "universal" year

ERTA expanded eligibility for IRA's to all employed workers and their spouses, effective January 1, 1982. What has been the effect of this action?

The Employee Retirement Income Security Act of 1974 (ERISA) established Individual Retirement Accounts (IRA's) for those who had no employer pension participation during the course of the tax year (and their spouses).

The Economic Recovery Tax Act of 1981 (ERTA) expanded eligibility to all employed workers and their spouses, effective January 1, 1982 (see Figure 1). This action, a crucial part of the Reagan Administration's program to increase capital investment and revitalize the economy, led to one of the major advertising campaigns of all time and to a significant reallocation of capital.

Assessing the impact of ERTA

Information on ERISA IRA's provides a base for evaluation of the ERTA expansion.

One criteria is utilization. During the 1975 to 1981 period, IRA's experienced low utilization: 5.3 million of 48.9 million eligible persons, or 11 percent. Additionally, IRA utilization had a high correlation with income levels. As Table 1 shows, utilization ranged from .2 percent of those with adjusted gross income of less than $5,000 to 52.5 percent for those with adjusted gross income of more than $50,000.

A second criteria is asset accumulation. During the 1975 to 1981 period, IRA's accumulated to a total asset pool of $25.7 billion (12/31/81). As Table 2 indicates, by year end 1982, IRA assets had increased by 131 percent to at least $59.3 billion, and by the end of the 1982 tax year, they had grown an additional 63 percent or more to at least $75.5 billion.

Table 1 1977 IRA Holders (by income class)

Family Adjusted Gross Income (in dollars)	Percentage of Eligible People With IRA's
$ 0- 5,000	.2
5,000-10,000	1.3
10,000-15,000	3.3
15,000-20,000	5.8
20,000-50,000	21.7
Over 50,000	52.5

Source: U.S. Treasury Department data based upon adjusted gross income

by **DALLAS L. SALISBURY**
Executive Director
Employee Benefit Research Institute
Washington, D.C.

The first full tax year's experience with IRA's after ERTA might be judged in three ways based upon this data. First, the expansion of eligibility does not appear to have increased utilization among lower income individuals. Second, ERTA does appear to have led to a dramatic increase in the absolute number of IRA's. Third, ERTA did lead to a huge increase in the amount of money deposited in IRA's. These judgments lead to at least three questions that are dealt with in the sections that follow.

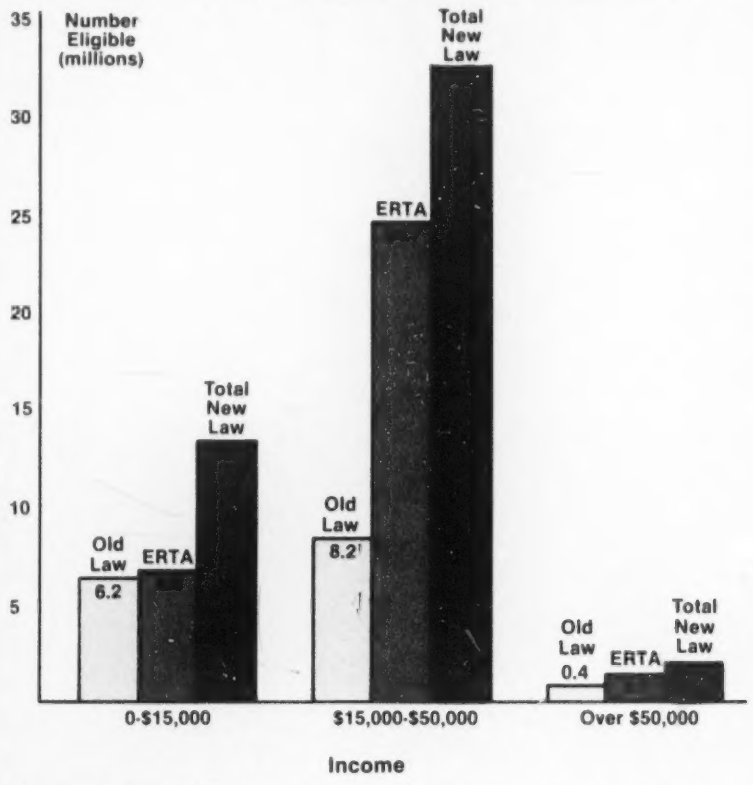
IRA's as retirement income

Most articles in the press since the passage of ERTA have placed primary stress on IRA's as savings and tax-deferral vehicles rather than as retirement plans. Accounting and tax journals, as well as many advertisements, have explained how small the "termination" penalties are for upper income individuals—the principal beneficiaries of IRA's. Surveys indicate that a majority of those establishing IRA's did it for tax reasons.

It is not necessarily bad for the

The views expressed herein are those of the author and should not be attributed to the Employee Benefit Research Institute.

Figure 1 Increase in Workers* Eligible for IRA's Under Economic Recovery Tax Act of 1981



*Workers, Age 25-64 with more than one year of service and employed over 1,000 hours a year.

Source: EBRI Tabulations of May 1979 CPS Data

"R" in IRA's to be silent. It may only be a problem if IRA's are counted as a sure source of retirement income by the Congress when it considers public policy changes towards other retirement programs—whether that be private pensions, public pensions, or Social Security.

IRA's represent an area in which the employee benefits community should be very interested in accurate packaging.

New savings or transfers

A major intent of the Congress in extending IRA eligibility was to encourage *new* savings. The Federal Reserve Bank of New York, several prominent economists, and EBRI have found that most of those who opened post-ERTA IRA's did so by transferring savings into an IRA or by placing money that would have otherwise been saved into an IRA.

It may be significant that even though 1982-tax-year IRA contributions approached $50 billion, the government reports that total personal savings in the United States dropped during that period.

This may represent a short-term aberration. For the long term, IRA's may have a significant effect on the U.S. savings rate. This may, however, depend a great deal on whether the "R" in IRA proves real.

For obvious economic reasons, the long-term answer is meaningful to business as business and workers as workers, as well as to the employee benefits community.

IRA's and public policy

When ERISA established the IRA, Congress clearly viewed the instrument as a supplement to other sources of retirement income. When ERTA extended IRA eligibility in 1981, Congress was still moving in the direction of "expanding the pie." By 1982, when the ERTA provision became effective, the landscape had changed. Attention turned to stabilizing, and perhaps contracting, the private accumulation of tax-favored resources for retirement income in an effort to increase Federal revenues. Nineteen eighty-two marked the year of change from an "era of expansion" to an "era of allocation."

Senator Robert Dole, in February, 1983, requested a Congressional Budget Office (CBO) study of "Public Policy Towards Private Pensions." He specifically asked for an assessment of further reducing the IRC 415 limits in favor of higher IRA limits. The principle significance of this request is the trade-off concept: the pie will not get bigger. The question of allocation had become the central focus of public policy in the "pension" area.

The "pension" must be placed in quotes because it is schizophrenic. Are we interested in capital accumulation *per se*, that is, savings, or are we interested in savings for retirement? During an era of expansion, the answer did not much matter. During an era of allocation, it matters a great deal since "pension" vehicles differ significantly when judged against a *temporary* savings versus *retirement* savings standard.

Additionally, as shown in Table 3, "pension" vehicles differ significantly when judged against a standard of providing either form of savings across income levels. Traditional employer pensions provide eight times as much coverage at low income levels than do IRA's. During an era of allocation, this raises quite obvious equity questions that can be avoided during an era of expansion.

For example, during the seventies as pension assets expanded and "social" spending dollars tightened, many people looked to the pension pool as a potential source of funds. As Presidential candidates look to pensions as a finance tool for "reindustrialization," this interest intensifies. Most ERISA fiduciaries and the ERISA agencies frown on this, since they feel it interferes with the objective of retirement income provision.

Now, the IRA pool has grown, and the cycle is repeating itself. There are now proposals for the Individual Housing Account (IHA), the Individual Education Account (IEA), and others. In an era of allocation, however, these proposals come with a new twist: every dollar of expected revenue loss must be